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ETHNOLOGY OF THE INDO-PACIFIC
ISLANDS

by

J. R. LOGAN

VOL. II.

PREFACE.

Those readers who have accompanied me from the first do not need to be reminded that the publication of this work has extended over several years; and that the increasing light thrown on the comparative characters of each family of language, during the revision of the sections relating to it, has disclosed defects in the preceding ones. The continuity of publication and equality of treatment, originally intended, have been prevented by frequent and, at times, prolonged breaks in the attention I have been able to give to the subject, and, in some degree, by absence from the place of printing. The consistency which the work had when first rapidly written, as a statement of the opinions to which I had been led by a review of the other linguistic groups with reference to the Oceanic, has been lost by the lapse of six years, during which ethnology has not stood still, while I have been endeavouring to bring these opinions to the test of a more searching enquiry into the peculiarities of the different groups. A final revision, on the completion of the work, can alone restore its uniformity, by bringing all its facts and inferences into harmony with the knowledge of the time at which its publication may be concluded. It seems necessary, however, on the separate issue of the present portion, nearly two years after its earlier pages appeared, to warn the reader that some of its glossarial details are at variance with the more accurate acquaintance with the Himalaic and Dravirian roots which I have obtained from the minute comparisons in chap. vi. These errors will be best understood by a reference to that chapter, and especially to the comparative table of Dravirian and Himalaic roots which will be found in it. Some of the most important will be here noted, in addition to errors of the press and of haste.

In some places I have used the word *Himalaic* in a large sense, and as the paragraph explanatory of it was omitted in the proper place, it is necessary to mention here that, for want of a better term, I have applied it to that large group of cognate languages and tribes which have immemorially clustered in and around the Himalaya and the ranges subordinate to it, and the preservation of the native character of which must be chiefly ascribed to the protection afforded by these mountains against the more powerful and civilised races of Eastern Asia—Chinese, Scythic, Dravirian and Arian. An extract from a letter to Mr. Hodgson (15th July 1856) will illustrate the application of the name. "That my Mon-Anam group was the *Bengali* of the pre-Tibetan era (using Tibetan for the present Scythoid branch) and continuous with the Vindyan Dravirian dialects is demonstrated; but I am not prepared to admit that Dravirian has not a distinct archaic ingredient, not derived directly either from the Mon-Anam or the Tibeto-Burman branch of what I have termed "*Himalaic*" till you can supply us with a more appropriate name. I conceive the Draviro-Australian branch of Scythic or rather of Chino-Scythic, to be of vast antiquity, and to have long preceded the descent of the Chino-Tibetan race from their trans-Himalayan abodes. Its strong Scytho-Caucasian element appears to me to show that it came round the western extremity of the great dividing barrier between middle and southern Asia. The Mon-Anam or *East Himalaic* stem was more Chinese and less Scythic than the later *West Himalaic* or *Tibeto-Burman*. All the earlier dispersed languages—that is, their mixed and sometimes hybrid descendants—have a core of primary

roots, retaining a close resemblance to each other, and to those of the vocabularies that have remained in and near the primary whole of the Mid-Asiatic tribes. In this way I would explain the peculiar Chinese element of Himalaic, Caucasian (preserved by the mountains), and Dravido-Australian, and the secondary Himalaic element of Caucasian, Dravido-Australian and other languages. The East Himalaic tribes probably occupied much of what is now eastern Tibet and western China; and though the precise line of their first southern migrations can hardly be traced with certainty, it is most consistent with the general character of the Mon-Anam glossary, to infer that they first descended into the Brahmaputra basin by the routes afterwards followed by the cognate Tibeto-Burman tribes, and thence spread over the Gangetic valley, mixing with the prior Dravirians, and, in the course of ages, eliminating the Dravirian physical element, though retaining Dravirian pronouns, numerals &c. Of course there may have been other more eastern migrations, but the Mon-Anam branch, which predominated and spread everywhere in Ultratania prior to the Tibeto-Burman, had its primary southern home and nursery in Bengal or the Bhramaputra-Gangetic valley, for its basis of Dravirian, and of a secondary or corrupt dialect of Dravirian, could have been obtained nowhere else."

The name is convenient in distinguishing the various elements of Asiatic ethnology. The latest of the three formations of the Indian province has appropriated its only general name, which is radically Himalaic.* This has rendered it necessary to adopt a second name for that formation which would otherwise have had the first claim to the designation of Indian,—the Dravirian. A third is required for the intermediate great formation of northern India and Ultratania. Tibetan might be made to include the Indian and Transgangetic languages of the proper Tibetan type; but Mon-Anam has native characters which cannot be confounded with those of the more Seythoid Tibetan, and it is most convenient to use a distinct name for the formation as a whole.

December 1856.

ADDITIONS AND CORRECTIONS.

ch. v. sec. I. Pronouns and Generic Particles.

Page 1. The calculation of chances here ascribed to Bopp, is Bunsen's. Alluding to the hypothesis that families of language had many distinct origins, he says that "the very roots, full or empty, and all their words, whether monosyllabic or polysyllabic, must needs be entirely different." "There may besides be some casual coincidences in real words; but the law of combination applied to the elements of sound gives a mathematical proof, that, with all allowances, that chance is less than one in a million for the same combination of sounds signifying the same precise object." My objections to this position have been greatly confirmed by my subsequent comparisons of Chinese, Himalaic and Seythic roots. The number of the elementary sounds that entered into primitive language appears to have been exceedingly small. The same monosyllabic roots (phonetic) are repeated again and again, and meet us in every class of words. Like all other arts, language was, in its earlier stages, rude and narrow. Only

* Siad (whence Hind, Ind) is a Himalaic root for river.

material things were named; and to the undeveloped family of savages, few even of these required names. The same name sufficed for many objects having common properties. The growth of the analytic faculty must have been very slow. Most new names were but old ones in new shapes. Distinct sounds were not in general invented or imitated for new conceptions. The conceptions and the names grew together from the old stock. The separation of families must have been the grand source of development, intellectual and linguistic. By this means chiefly the primary roots acquired variety in phonology and application. Each new family or tribe became the nursery of a new dialect; and the intercommunication of these dialects gradually enriched each with ideas and vocables. It was only by the aid of hundreds of sister-dialects that it became possible for any one dialect, after ages of growth, to make an approach to a language in our sense of the word. In every period of time and in every group of languages the same mutual action goes on. Hence, as the genealogy of every existing dialect ascends to the beginning of human speech in the world or in the race, and passes through long periods of barbarism and of a minute subdivision of tribes, its vocabulary has had innumerable proximate sources. Its discoverable homogeneity is in proportion to the narrowness or exclusiveness of the circle of dialectic development and interaction. It may be at a maximum in a group that has always remained secluded, so far as the geography of any province admits of this, and although the seclusion has lasted so long that archaically distinct dialects have now few *vocables* in common.

Page 6. The new series of Vindyan vocabularies compiled for Mr. Hodgson by Mr. Nevill (J. B. As. Soc for 1856, p. 46) have the common form of the 1st pron. A-nu Kondh, nga Savara, nai-sa Gadaba, (nai-myo poss., na-nu Yerukaba, (na-mu, na-mbu-ru, pl., the second form combining the absolute and the relative pl. particles as in the Telugu ni-ru). The second pron. has the com. form in Gadaba no, Yeruk. ni-nu (pl. ni-nga-lu=ni-ng-la Badaga, a-va-ru), Kondh yi-nu. In the Nilgiri series furnished by Mr. Metz. a-du-m is given as a sing. form of the 3rd pron. in Toda, along with a-du, a-va-n, the pl. being a-va-r a-du-m.

Page 15. Savara supplies a new proof that the labial 2d pron. of Kol is a plural form used in the singular. It uses the same pl. form, in both numbers, a-ma-n *thou*, a-ma-n *ye* (pa-n Gad., a-va-ru Yeruk).

Page 7 line 12 from bottom, after "Pl." delete the comma and insert a full stop

- " 9 last line after "only" insert a comma
- " 10 line 18 from top, for "dialective" read dialectic
- " 11 line 18 from top, after "adi," delete , - and insert ,
- " 15 line 14 from top, betwixt "ngu" and "mu" insert -
- " " line 17 from top, betwixt "mu" and "sometimes" insert a comma
- " " 6th line of the first note from top, for "present" read parent
- " 16 line 13 from top, betwixt "we" and "Tamil" delete . insert ,
- " " line 6 from bottom, betwixt bu" and "am" delete - insert ,
- " 19 line 15 from top, betwixt "Libyan" and "form" delete ,
- " " line 18 from top, betwixt "the" and "affinity" insert pronominal
- " 20 line 11 from top, after "ing" insert ,
- " " line 17 from top, after "eng" insert ,
- " " line 21 from top, after "plural" insert ,
- " " line 22 from top, after "possessive" insert ,
- " " line 9 from top, of the note, betwixt "incorporation" and "a"

insert at

- Page 20 line 3 from bottom of the note, betwixt "Kinawari" add "Tibetan" insert ,
- " 21 line 17 from bottom, after "i" insert , ni
- " 22 last line, after languages delete (and insert ,
- " " last line of the first note, for vol. ii. read vol. i.
- " 23 line 12 from bottom, betwixt "the" and "Indo-European" insert Dravido-Australian and
- " 24 line 12 from bottom, after "on" insert ,
- " 25 line 4 from top, after "Zimbrian" insert Dravido
- " " line 9 from bottom, for "person" read pronoun
- " " line 3 from bottom, after "centre" insert philologically
- " 30 line 15 from top, after "American" delete and African.
- " 36 line 2 from bottom, delete nya-n
- " " last line, for "nga-n" read nga-n
- " 37 line 9 from top, for "obl." read abl.
- " " line 11 from top, for "Kam." read Karn.
- " 38 line 27 from bottom, before "double" insert a, and after "Chinese" delete , and insert ,
- " 38 line 7 from bottom, before "poss." insert in
- " 39 line 4 from bottom, for "Kari" read Khari
- del. line 6 from bottom, kha being a facetious Siamese pronoun. Its proper meaning is slave.
- After last line, add chi Thochu, ji Newer.
- " 40 line 3 from top, for "Toung-lhoo" read Toung-thu.
- " 50 tam-she is all in Bhodian

The following additional notes received after the Sec. had been printed off, were inserted in the number of the Journal in which it appeared:—

1st Note. P. 29, 2nd line from top, after the word "African &c."

* In other Indo-European languages the labial is demonstrative &c. The Welsh 3rd pronoun *masc.* is *ev, vo, eve, iwo, e, o, the fem.* being the common sibilant or aspirate 3rd pronoun *hi, si, i* &c. This is a remarkable coincidence with Semitico-Libyan. The coincidence between the Welsh and the Egyptian 3rd pers. *masc.* has been remarked by Dr. Charles Meyer. Sanskrit has a demonstrative base *ma* (Bopp § 368). Zend has *ava, Slavonic ovo, "this."* The Welsh labial 3rd pronoun is more likely to be connected immediately with the Indo-European labial demonstrative and postfix than with the Semitico-Libyan postfix. It is probably a remnant of the period when the labial as well as the sibilant and dental might be used as a 3rd pronoun and it is quite possible that the former was then masculine and the latter feminine. That the labial had become neuter as a definitive postfix, and that the dental had displaced it as a 3rd pronoun and lost its sexual function, would not be anomalous. The Semitico-Libyan family presents similar phenomena. In some languages the sexual functions of the two definitives have been lost. In others the feminine has displaced the masculine. If such changes took place in Indo-European they must have preceded the separation of all the branches save the Celtic, which appears to have carried westward the use of both pronouns. The Semitico-Libyan system renders it probable that the sibilant or dental was originally absolute or common.

2nd Note. P. 29, line 8 from top, after the word "Anm &c."

* In the Gend war "he," but "who," the plural *r* of Dravidian occurs

in the singular, the pl. taking *-g, -k* (*wur-g, bur-k*). This is probably one of the dialectic confusions of form common in the northern dialects and it may have had its origin in the southern use of the plurals as honorific forms of the singular. It may, however, have been the fem. form of the singular with *-r* for *-l*. In Australian, Yeniseian, Scythic, N. E. Asian and Semitico-Libyan the labial definitive so frequently occurs with a final liquid in the singular that it is necessary to recognize the existence of this form as a very archaic one (*bal, bar, wal, val, mal, man, bari, buli* &c. &c.) There are even strong reasons for holding that this particle and the liquid *or, ra, ri, la* &c. were primarily identical and that the dual and plural function of the latter was secondary, and acquired from the use of the labial definitive in its various full and contracted forms (e. g. *bar, bari, ba, ar, ri, li, ni* &c.) as the numeral "two."

II. Numerals.

The new Nilgiri and Vindyan series have led me to adopt some modification of the analysis in Chap. v. The reasons will be found in the sec. on the Mon-Anam numerals in Chap. vi.

1. The S. Drav. *on-ru* 1, I now read *o-nru*, and identify the root with *vo* of the 1 of Toda *vo-ddu*, Telug. *vo-ka-ti*, Nilgiri *vo-ndu, vo-ddu*, and the com. *pa, ba* of 10, *pa-ku-du* &c. (p. 56). Yerukala has *vo-ndu* = *o-ndu* Karn. The Male *pa-ndu-ng, o-ndu-ng* 1 are similar forms. Comp. also the Telugu *va-nda* 100. The Kol and Mon-Anam *mo-i* &c. 1 is the same root, with a different Drav. poss. postf.

2. *era-du* and the variations in 2 and higher numbers I now read *e-ra-du, e-d, i-ru, e-r* &c. *e, i* being the sole remnant of the ultimate root, which in its oldest form had *ra, ru*, only as a postf. or second element, but afterwards superadded *-du* &c., probably on the earlier postf. concreting with the root remnant. Uraon has *e-no* 2, *ma-no* 3. From the facile and frequent elision of the initial labial it is probable that the full form of the initial root was *be, bi*. (p. 60). The form *be-ra* &c. agrees with the Kol *ba-r*; and that *ba* is the initial root and *r* a second element or a postfix in *bar* appears from its occurring with the guttural postfix in *Savara, ba-gu*, a form preserved also in 7 of Yerukala *vo-gu*, Kiranti *bha-g-gu* and Mon *bo-k* (2 for 5), and identical with the Telugu *vo-ka* of *vo-ka-ti* 1 and the com. S. Drav. 10. It is probable that in *be-ra* &c. 2, *ra* was a second archaic definitive or unit.

4. If 2 be *e-ra-du* &c., 4 must be *na-lu*, i. e. the secondary element without the initial one. The Kol *pa-n* retains the root of 1 with the concreted consonant of the second element or primary postf. The form *opun-ia* is probably from *op-pu-n*, i. e. *op* 3, *pu-n* 1. The Savara contracted form of 4, *vo-n-jî* (1 for 3, 1) is evidently the full form of the Tuluva *o-n-jî* 1.

5. The Gadaba *mo-lla-yi* confirms the analysis of the Kol *mu-na, mo-r* &c. as 3 (S. Drav. *mû-du* &c.) for 3, 2.

8. *e-ntu* (not *en-tu*) as in 2.

The Kol *irî* appears to be radically *i-r-l*, a contraction of the S. Drav. *ira-du* = *ir-lu*.

The exceptional GOND, Telugu and Tuluva forms must, in conformity with the amended analysis of 2, be read *o-na-mu-r, e-ni-mi-di, e-na-me* i. e. *a-m, e-m, e-m* 2, and *mu-r, mi-di, me* 10 in the form of the unit found in the Kol 5, S. Drav. 3 &c.

9. The Telugu *tammidi* must be *to-mi-di*, i. e. *mi-di* for 10 as in *en-mi-di* 8, and to, a distinct root for 1, preserved also in the Chentsu *to-ra*, 9, and corresponding with the Drav. dental 3d pron. and def. (p. 56).

The Kol *a-r* of 9 has a for 1, as in the S. Drav. 6.

The identification of the S. Drav. on 1 with *vo.n*, and *e.ra* 2 with *ba.ra* &c. completes the proof of the agreement between the basis systems of S. Dravirian and of Vindyan, and between both and the primitive labial system preserved in Australian. In its first form the system was simply the labial definitive, or the labial and liquid, repeated or compounded.

It is clear that the liquid in *ba.ra*, *bi.ra*, &c. 2, is very archaic, and that it early possessed a distinct numeral and plural force. In the Semito-African and Scythic systems, in which the same compound was the principal archaic numeral name, the liquid, changing to the sibilant &c., has been more stable than the labial initial, and there are strong reasons for regarding it as the essential element in 2. See App. to Sec. 6 of ch. v., *The Semitic and African Numerals*, pp. 18, 19, 43. See also the 2d Note *supra* p. v.

III. Miscellaneous Words (pp. 78 to 163.)

96. The remark as to the Dravirian affinities of the eastern vocabularies of Irania—Pushtu &c.—has been corroborated by Mr. Norris, who, in his edition of Dr. Prichard's *Natural History of Man*, i, 171, doubts the Arian character ascribed by Prichard to Pushtu.

104. [The following paragraphs were accidentally omitted in printing this section but were inserted in the same number of the Journal. They should come in on page 104 and precede the para. commencing "The following are illustrations from Sennitico-Libyan," &c.]

As the Scythic languages appear to have always been located in Upper Asia, and they still preserve a form that allies them closely both with the monosyllabic and with all the harmonic languages, it is probable that the mother tongues of the more outlying and widely separated families of the World were intimately allied in their glossaries to the primary Scythic ones. A comparison of the various Scythic names for some of the parts of the body may thus be considered as the first step towards ascertaining the true relations of the names for the same objects in any of the other families, as the Dravirian or Draviro-Australian.

A very slight examination of the Scythic names for the parts of the body shows that we are dealing with one really primitive vocabulary, which has suffered dialectic changes almost without limit. The same primary roots are found in all the languages from the Kamchatkan to the Hungarian. The same secondary or dialectic forms and compounds are found in numerous vocabularies of the same and of different groups, sometimes preserving the same application and sometimes varying in this respect. Most of these variations are evidently archaic. They were formed in that early stage of language when fixed conventional names had not been appropriated to each part of the body, but several were described by the same primitive roots, the distinctions being indicated by the addition of other words and partly, in all probability, by gesture. In time various dialectic changes of the kind we have indicated took place, and the same root became current in a multitude of forms and with different conventional limitations of meaning. The history of these changes is probably too complex to be completely recovered, and the blendings and extinctions of dialects that must have occurred since they commenced have obscured

and diminished the glossarial evidence.

The Scythic roots for the principal parts of the body are the labial; the guttural; the sibilant and dental; and the liquid (*n, l, r,*),—that is, all the primary sounds. Of these 4 roots the 3 last are not strongly distinguished. *R* and *S*; *S, T* and *D*; *D, N, L* and *R* are evidently merely variation of each other in several cases. The roots are monosyllables of 3 forms,—1st, the consonant followed by a vowel, which varies sometimes even in the same group; 2nd, the consonant preceded by a vowel; 3rd, the preceding forms followed by a final consonant, vocalised or not. The terminal consonant varies, and it appears in general to be purely phonetic or non-radical. The most common terminal is the liquid *n, l* or *r*. After it *s, t*, is the most frequent, but as *s* and *r* are much interchanged, these two classes are not well distinguished. The labial and guttural are much rarer. The 1st form, pure or with a final consonant, is the most common. The 2nd is chiefly found in the Ugrian languages, and as similar forms are produced by the elision of an initial radical consonant, it is not always easy to decide whether the Ugrian consonant is radical or not. Reduplicated forms of all the roots occur. Besides these forms, others occur in which a definitive is attached to the root, generally postfixally. The definitive is sometimes a simple vowel, generally prefixed, but most frequently a consonant, generally postfixed, and either simple with a final or initial vowel, or such a monosyllable with a final consonant. Double postfixes also occur. It is often difficult or impossible to decide whether the final consonant is a postfix or part of the root. Where the root has a final consonant the servile character of the superadded consonant is in general free from doubt.

The following examples will illustrate this diversity of forms. 1st, *pa, ba, wa, va, pi, pu, po, &c*; 2nd, *ap, ab, ip, ib, up, ub, op, ob, &c*; 3rd *pan, pin, pen, pou, bar, bir, bat, pit, pet, put, pas, pis, pus, apt, ipt, upt, obt, &c*; 4th, with a def., *palan, pilga, wilyt, pilye, wilugt, wilyulgr, buran, pank, pankt*; 5th *papa, mimi*.

The appended table of Scythic names of parts of the body is intended to facilitate the comparison of the roots.* I have thrown into it all the vocabularies that are found in Klaproth's Asia Polyglotta, for Head, Face, Eye, Hair, Mouth, Lip, Teeth, Tongue, Nose, Ear, Hand, Finger and Foot, and the arrangement is purely phonetic. In several instances words that resemble each other in sound may be varieties of roots independent in their origins. But there can be no doubt that a large proportion of those vocabularies that associate themselves phonetically in the table are also radically cognate. Such a table, for ethnological purposes, should contain not only all the names of parts of the body, but the roots in all their other applications, and when a thorough Scythic philologist appears we may hope to obtain tables of this kind. Without such comparative vocabularies of groups of roots in every family of language, it is impossible to ascertain with precision the various degrees of affinity which connect any given language or family with others.

119. This should have been 115, and followed by pages 164, 165, and 166. The page following 166 was omitted altogether in making up the forms and is here inserted. It is p. 228 of the Journ. of the Ind. Arch. for April-June 1853.

* This will be given with similar tables for other families.

ma, wi, mi &c.; 2, mil; 3, *ma-hara, nu-bara* &c.; 4, *mis, mas, mit, met, mat, mad, mot* &c.; 5, *mikinek, mak*, &c. [See EYE.]

Making the highest allowance for accidental coincidences it is clear that the same roots, the same phonetic forms of roots, and the same combinations of root and postfix, are found with variable meanings not only in the different languages of the same family, but in different families. When the various Aso-African families are compared with reference to their vocabularies of primary words, they appear as if they were all dialects of one mother tongue and it does not seem possible to account for phenomena so purely dialectic without concluding that each language ascends, through various phases to an ultimate monosyllabic condition, and that, at some period remote even in the purely monosyllabic era, their protophasts were, in reality, dialects of one language. The roots which we have been considering most originally have been current in a single family, before they became dispersed amongst many, and by the separation of these received various dialectic applications. Without such original linguistic concentration or unity, followed by such division and dispersion, the facts cannot be reconciled, for the mere dissemination of the words of dominant tribes in ages when the Old World was peopled in all its principal divisions could not account for an agreement so radical, so universal and so complex. It will explain many of the coincidences, but nothing short of the admission of one primary vocabulary having been preserved in separated families and been dialectically modified in its applications, can explain the whole.

Amongst the secondary dispersions and diffusions it is clear that the Scythic or proto-Scythic is by far the most important as it was universal. It rests on the Chinese or monosyllabic stage of vocables, and it enters that in which a definitive became attached to the roots. Many of its peculiar forms and combinations are found in all the southern and western provinces, and it seems to be a necessary inference that before the Australian formation was carried to Asonesia, Semitico-Libyan to Africa, or the Euskarian to Europe, they were comprised along with the archaic Caucasian, Tibetan, Scythic and Indo-European, in a comparatively narrow Asiatic geographical circle. The only remaining formations, the Zimbrian and American, are expansions and developments of proto-Scythic dialects.

128. The note belongs to p. 129, and note † of p. 129 should be note * of p. 128.

132. line 3 from the bottom *for pishik* read *to-pisa*, and in the following line, *for to-pisa*, read *musa, mus*.

137. The substantive root in the name for the *Buffaloe* is the labial. The liquid is the root for *water*, *e-ru-ma* = *water-cow*.

138. In *tanga cow* of Jili (not Singpho) the root is *nga* (*ta-nga*).

140. The statement that in Chinese the root alone signifies *buffaloe* and the inference from it are incorrect. In Chinese, as in Dravirian, the name for the buffaloe is *water-cow* (or *ox*), and it is only by contraction that *en* &c. alone is applied to it.

141. The *Deer* god is identical with the Bhotian god *mure*.

145. The sibilant name of *Tiberkhad* &c. is *Tibeto-Ultradian*.

155. 7th line from foot, *for moon*, read *silver*.

157. del. 5th line from foot.

164, 165, 166 are misplaced; they follow p. 119.

Page

159 to 167 following 166 should be distinguished by an asterisk.

ERRATA IN CHAP. XI SECS. 1, 2, 3 and 4.

- 184 11th line from the bottom *for these read those*
 185 4th line from top *for Gangitic read Gangetic*
 182 last line, *for r-lik read i-lik; syod, light, Turk. is a distinct root,*
 from the Tib. bod.
 189 10th line from bottom *for all of read of all*
 190 14th line from top *delete **
 15th line from top *after vocabularies insert **
 8th from bottom *after s insert ,*
 193 7th line from top *after Jili insert ,*
 11th line from top *after being and manner insert ,*
 12th line from top *after province insert ,*
 13th line from top *after Hlor insert ,*
 15th line from top *after range insert ,*
 16th line from bottom *after Thochu insert ,*
 9th line from bottom *for root read roots*
 8th line from bottom *after Chinese, insert —*
 7th line from bottom *after former, insert —*
 6th line from bottom *after Tartar, insert —*
 3rd line from bottom *after dialects insert ,*
 2nd line from bottom *after Chinese insert ,*
 194 10th line from top *for portion read proportion*
 11th line from top *after vocalic insert ,*
 12th line from top *after words insert ,*
 16th line from top *for which in read which is*
 14th line from bottom *after Manyak insert :*
 195 8th line from bottom *for brigi read brigi*
 196 6th line from top *after labial and Gyarung insert ,*
 8th line from top *delete b in and insert di,*
 11th line from top *after prefixes and infrequent insert ,*
 13th line from top *for mo-; k-, read mo-; ki-, and delete*
 cha-, ki-,
 197 3rd line from top *after trait insert ,*
 12th line from top *after present delete) and after generic insert ;*
 14th line from top *for localitive read locative*
 16th line from top *for ka-, ta-, read ka-ta,*
 17th line from top *for ta-, ta-, read ta-ta*
 10th line from bottom *for Tibetan read Tibeto*
 198 11th line from top *after crudes insert ,*
 199 10th line from top *for hazang read huzang*
 10th line from bottom *after origin insert ,*
 8th line from bottom *after province insert , after retained*
 insert , after degrees insert ,
 2nd line from bottom *after form insert ,*
 2nd line of the note *after pronoun delete . and insert ;*
 200 3rd line from top *after definitive insert ,*
 6th line from top *after substantial insert ,*
 4th line from bottom *after pronoun insert ,*
 3rd line of the note *after shui, insert sn,*
 201 15th line from bottom *for ngo read ngo,*

Page

- 201 11th line from bottom *for formations read forms,*
 " 7th line from bottom *after form insert ,*
 " 5th line from bottom *after Bhotian insert ,*
 202 5th line from top *for Tanglu read Tunglu,*
 " 7th line from bottom *for nom, read nom.; for pen read poss.; for*
 n, and p, read n. p.
 203 7th line from top *after chha insert ,*
 " 12th line from top *for -gen read -gen,*
 " 15th line from top *delete T being a common Bhotian augment,*
 " last line of the note *for analogy read analogy,*
 204 11th line from top *for pen read hen,*
 " 13th line from top *after khui insert ,*
 " 15th line from bottom *after also insert ,*
 " 11th line from bottom *for cha-ta read cha-tu,*
 205 15th line from top *after -sin insert ,*
 " 17th line from top *for Nyertsmsk read Nyertsbiuk,*
 206 12th line from *after -ra-ng insert ,*
 " 7th line from bottom *after Klapoth insert ,*
 " 3rd line from bottom *for seem read seen,*
 " last line *after Ultraindian) insert ,*
 207 15th line from top *after &c) insert ,*
 " 5th line from bottom *for Kyan read Kyau,*
 208 10th line from top *for Kyan read Kyau,*
 " 18th line from top *for 2 read 2nd,*
 " 19th line from top *after kho insert ,*
 " 16th line from bottom *after r dialects insert ,*
 " 15th line from bottom *after and insert , after the insert , after*
 da insert &c.
 " 13th line from bottom *after Gurung, insert the*
 " 7th line from bottom *after &c. insert , and for Da read Drav.*
 " 6th line from bottom *after Scythic insert ,*
 " 3rd line from bottom *for lar. ler, read lar, ler,*
 209 5th line from top *for -lu read -lu*
 " 11th line from top *for -kye read -kyi*
 " 15th line from bottom *after Naga insert ,*
 " 13th line from bottom *after Abor-Miri insert ,*
 " 3rd line from bottom *for ngar read ngai*
 210 2nd line from top *after def. and Bhotian insert ,*
 " 15th line from top *before is insert , It*
 " 4th line from bottom *after plural insert 1st ,*
 211 14th line from top *after -ta insert ,*
 " 16th line from bottom *after numeral insert ,*
 " 4th line from bottom *before Tibetan insert ,*
 212 7th line from top *for Bhotian read Bhotians*
 214 16th line from top *for naga read Naga*
 216 8th line from bottom *after ana-ta insert ,*
 " 7th line from bottom *after tu insert ,*
 " 4th line from bottom *after more insert or less*
 " 3rd line from bottom *after Chinese insert ,*
 " last line *after pron. insert ;*
 217 2nd line from top *after Dravirian insert ,*
 " 3rd line top *for respect read respects*

<i>Page</i>	
217	5th line from top <i>after</i> particles <i>insert</i> ;
"	6th line from top <i>after</i> forming <i>insert</i> ;
"	7th line from top <i>after</i> Chinese <i>insert</i> , <i>after</i> dialects <i>insert</i> of
"	8th line from top <i>after</i> European <i>insert</i> ;
"	9th line from top <i>after</i> Bhotian <i>insert</i> ;
"	11th line from top <i>after</i> languages <i>insert</i> ;
"	14th line from top <i>after</i> allied <i>delete</i> -
221	5th line from the bottom, <i>for</i> The <i>read</i> It is
	10th line from <i>for</i> achik <i>read</i> gchig,
222	18th line from the bottom <i>for</i> ni' <i>read</i> ni
	18th line from bottom <i>for</i> gi <i>read</i> ngi
224	22nd line from the bottom <i>for</i> ne-ro-ka <i>read</i> ng-ro-ka
225	14th line from the top <i>after</i> def. <i>add</i> g-, and <i>after</i> b- <i>delete</i> g-
226	17th line from the bottom <i>for</i> Athapas, can, <i>read</i> Athapasean
229	17th line from the bottom <i>for</i> puli <i>read</i> pu-li
	5th line from the bottom <i>after</i> nyet, <i>add</i> was
231	9th line from the bottom <i>after</i> all, <i>add</i> the
234	6th line from the top <i>for</i> 31 <i>read</i> 25
245	5th line from the top <i>for</i> affinitive <i>r ad</i> affinities
237	15th line from top <i>for</i> , at <i>read</i> . At
240	3rd line from top <i>for</i> by <i>read</i> ly

* * For a later analysis of the numerals, and many forms not given in Sec. 5, the reader is referred to Sec. 7.

The comp. vocabulary of Bhotian may be corrected by a reference to Sec. 6.

ETHNOLOGY OF THE INDO-PACIFIC ISLANDS.

By J. R. LOGAN:

LANGUAGE.

PART II.

THE RACES AND LANGUAGES OF S. E. ASIA CONSIDERED IN
RELATION TO THOSE OF THE INDO-PACIFIC ISLANDS.

CHAPTER V. (*Continued*).

ENQUIRIES INTO THE ETHNIC HISTORY AND RELATIONS OF THE DRAVI-
RIAN FORMATION,—EMBRACING NOTICES OF THE FINO-JAPANESE,
CAUCASIAN, INDO-EUROPEAN, SEMITICO-AFRICAN,
BUSHARIAN AND AMERICAN LANGUAGES.*

Sec. II. GLOSSARIAL INDICATIONS OF THE ETHNIC HISTORY AND
RELATIONS OF THE DRAVIRIAN LANGUAGES.†

1. PRONOUNS AND GENERIC PARTICLES.

A comparison of roots, unless it embraces a wide field and is made with extreme caution, cannot lead to solid and satisfactory results. That great Iranian philologist Bopp has said that the chance is less than one in a million for the same combination of

* In the present state of glossology, every comparison of words for ethnic purposes must be exceedingly imperfect. The most distinguished philologists have not been able to avoid blunders when they have enlarged the circle of their com-

sounds having the same precise meaning in unconnected languages. This calculation of probabilities is evidently based on a formation of which the syllables are frequently biconsonantal and the words polysyllabic. It is totally inapplicable to monosyllabic languages, or indeed to a comparison of ultimate roots in any formation, because these roots are generally monosyllables. In the Kwan-hwa Chinese, for example, the number of words is about 48,000, but the sounds to express those words only amount, even with the tone flexions, to 1,203. So that each sound, on an average, would represent 40 different words if these words were all in use. By enlarging the number of monosyllabic languages for comparison, the number of homophons increases. But this is not all. In the progress of language the tones decay, become reduced in number and are ultimately lost. When the process of emasculation goes on without interruption, the vowel sounds are contracted to a very small number. In Philippine there are only three distinct vowels, *o* and *u*, *i* and *e* being very commutable. Add to this that in

comparative studies in order to take in languages with which they are imperfectly acquainted. A complete investigation of the ethnic history of a single root demands a thorough knowledge of all the languages in the world and no single philologist can ever attain this knowledge. Hence it is only by combining and comparing the labours of numerous comparative linguists that the ethnology of roots will ultimately be perfected. Roots ramify through vocabularies in a very complicated manner changing not only their forms but their meanings, so that it is not possible, by merely turning over the leaves of a dictionary, to ascertain whether a given root exists in a particular language or not. We must know the phonology of the language, its phonetic and glossarial relations to other languages, and the kind of analogies that prevail throughout its glossary and enable us to trace the metamorphoses of its roots. The only man who can pronounce whether a given root exists or not in a particular language, is a sound comparative linguist who has devoted himself to a thorough analysis of that language. Until complete analytic glossaries are prepared, the comparisons of ethnologists must continue to be in great measure empirical, and must be received with a considerable allowance for errors. The following comparisons require a large allowance not only from the necessity of the case but from the special disadvantages under which the collator labours. They are limited to the classes of words mentioned in the Prefatory Note to Part II. A full ethnic comparison of the Dravidian vocabularies with those of other families would be a labour not for a single life but for the ethnologists of several generations.

[Before sending this section to the press I received by the last mail steamer Chevalier Bunson's Philosophy of Universal History, to which Professor Max Müller has contributed two chapters on the Scythic, Dravidian, Tibeto-Ultranian, Thai, and Malay languages. Some of the glossarial details in this section and in the next chapter have I had been anticipated by Prof. Müller. Where he has supplied data which were not accessible to me, I have added a few notes which are distinguished by brackets. The supplement containing the comparative vocabularies having been printed some time since, I have not been able to subjoin any notes to it. I do not in this place offer any remarks on the coincidences between Prof. Müller's views on several points, and those previously published by me in the present series of papers. They will be sufficiently obvious to ethnologists who have read my 4th and preceding chapters, with the general remarks on Asonesian ethnology contained in the volume of this Journal for 1850].

comparing different formations, and even the various dialects of the same formation, consonants and vowels frequently exhibit great instability, so great indeed that it can be asserted with perfect truth that each vowel is capable of being, by successive gradations, transmuted into all the others. The same remark applies to the consonants. In Polynesian there cannot be said to be more than 10 (in Raratongan and Mangarevan 8) consonants, the sonants having generally become confounded with the surds. The dentals are transmuted into the liquids with great facility. They pass into the gutturals through the strong mutual affinity of the sards *k* and *t*, and into the labials through the liquids. Thus, to start with *t*. It may pass into *g* through *k*, on the one side, and through *d*, *r*, *l*, *n* into *m*, *b*, *v*, *f*, *p*, on the other. Its direct affinity to the sibilant and aspirate *th*, *s*, *z* &c. is so great that it frequently passes into them in many languages. Particles, whether separate, formative or flexional, are generally monosyllabic, and even to a large extent uniliteral in all formations. In the Burmah-Tibetan, the pre-Arian Indian, the African, the Turanian, and, it may be added, in the Iranian, words of all classes are radically monosyllables. It is evident, therefore, that the phonetic identity of a particle in two or even more languages has hardly any value at all as an isolated fact, for comparative and ethnic purposes. It happens, also, that a number of identical particles are so widely spread throughout most of the formations of the world that nothing can be learned from them *per se*, respecting the specific affinities of different formations. We arrive at this rule, that it is only by comparing particles in groups, and in connection with the entire phonetic and ideologic character of each language, that positive ethnic conclusions can be attained.

In the Burmah-Chinese languages there is little connection between the particles. They are in general as isolated and independent of each other as substantive words. In the Dravirian formation, on the contrary, they are intimately connected both phonetically and idiomatically, and this greatly facilitates their comparison with those of other formations. In Dravirian we find a number of particles formed into a well marked system, presenting even flexional traits. For example the principal pronominal terms, as exhibited by the purer languages, or those of the South, are, *na*, "I," and *ni* "then," *n* in the plural becoming *m*. Thus the three main

pronominal elements may be considered as flexionally related, and this gives to the Dravirian system a marked character. In addition to this the root is reduplicated, with a change in the second vowel, or it is combined with a definitive particle.

A. *Pronouns.**

Before attempting to trace the range and the affinities of the Dravirian pronouns, it is necessary to determine their proper forms, and mark their variations as accurately as possible.

The root of the First Pronoun occurs under the full forms *na* (Tamil, Kurgi, Karnataka, Gond, in pl. Malayalam, Male), *nga* (Malayalam) and *ne* (Telugu). The vowel becomes *o* in some forms. The definitive *-nu* is postfixed in Karnataka, Telugu and Khond. The Gond agentive *nu-na* appears to invert the relative position of the root and the definitive. The common Gond form, *nah*, preserves the true vowel of the root and postfixes the prevalent definitive of that dialect. Tamil, Malayalam and Kurgi postfix the contracted form of the definitive, *-n*. The root, as frequently happens in Dravirian glossology, loses its initial consonant in some forms, e. g. *anu*, *an*, *a*. The form *en* may be an inversion of *ne*, but it is better explained as a contraction in which *e* is the radical element (*en* from *nen* or *neru* like *an*, *a* from *nanu*, *anu*).†

* On the general subject of the Dravirian pronouns I may refer the reader to the valuable papers by the Rev. Dr Stevenson in the *Journal of the Bombay Asiatic Society*, and in particular to his article in the number for January 1852. My own glossarial comparisons had been independently made before seeing this paper, but it is due to Dr Stevenson to remark that one of the affinities which has considerable weight in my deductions has been noted by Dr S. although only as an isolated fact,—that of the 1st pronoun to the Chinese *ngo*. His general inference that the Dravirian pronouns are of a peculiar type more allied to the Turanian than to the Sanskrit—unless it refer to the structure and not to the roots—is open to the remark that the Sanskrit roots are Turanian or Scythic while the Dravirian are not. The 1st pronoun, Dr Stevenson remarks, “is allied to the languages of Arabia and Syria on the one hand, and on the other with the Chinese family,” and also with “the Tibetan.” The foreign affinities of the 2nd pronoun are not adverted to by Dr S. The main scope of his papers is to distinguish the Dravirian from the Sanskrit elements in the Guzarathi-Bengali class of languages. The honorific *ap*, *apan*, *apan*, &c., of these languages he identifies with the Dravirian *awan*. Every student of the languages of India will find much matter of the highest value and interest in Dr Stevenson’s papers. His comparative vocabulary of the non-Sanskrit vocables in the vernacular languages of India promises to be a work of solid erudition, and its completion will be an important service to Indian and Asonesian ethnology.

The resemblance between the Chinese, the Tibeto-Ultraindian and the Draviro-Australian pronouns was shown in the glossarial tables in my paper on the “Traces of an ethnic connection between the basin of the Ganges and the Indian Archipelago before the advance of the Hindus into India” read before the Royal Society of Edinburgh in January 1851, *vide ante* vol. vi, p. 654.

† In chap. IV sec. 6, I have considered *en*, *ne* as seemingly the radical form, and in some cases assumed as portions of the root elements that I now refer to

In the Tamil *ya-n*, Tuluva *ya-nu*, the contracted forms *an*, *anu*, take the common *y* prefix. The Todava *one*, *on* (pl. *om*) is a similar contracted variety, with the radical vowel changed to *o*. In the broad form *won*, *wom* it assumes a quasi-consonantal augment, like some other words, e. g. *on*, *won*, "one." The *o* form of the vowel also occurs in the Tamil verb form of the plural *om*, corresponding with the Todava; in the Gond oblique *no-wa* sing., and in the Male poss. *ong-ki* sing. *om* pl. (Tam. Tod.) The substitution of *o* for *a* is characteristic of the Toda phonology. But as the Gond and Male forms cannot have been immediately derived from it during the era in which the more civilised Dravirian nations have been interposed between the Todas and the Gonds, it is probable that the *o* forms are very archaic and were at one time widely prevalent. The Tamil remnant in the plural of the verb postfix is a strong evidence of the antiquity of *o*. Possibly it is the original form, but the general character of Dravirian phonology makes it more propable that variations in the vowel existed from an early stage of the formation. In unwritten languages dialectic changes in the vowels are very common.

The Second Pronoun has the full form *ni* in all the Southern dialects and in Gond, with and without postfixes (*-nu*, *-vu*, *-en*, *-k*). The forms *nu* and *u* [def. replacing pronoun] occur in the Tamil plural poss., and *na* in the Todava pl. The contractions *i* and *ai* are also found.

Two kinds of pronominal plurals occur. In one the root postfixes the ordinary plural definitives like substantives. All the relative or "exclusive" plurals of the 1st pronoun are thus formed. The second kind postfix *m* or flexionally replace the *n* of the singular by it. As it only occurs in the absolute or "inclusive" forms of the 1st pronoun, it is possible that in Dravirian, as in some other formations, one of the plurals of this pronoun is formed by the annexation or incorporation of the plural of the 2nd. In this view *m* would be radically a plural particle or root of the 2nd

the definitive postfix. The great commutability of the vowels in both the proper Dravirian and the Kol dialects, with the agglutinated and concretionary condition of the pronominal system, renders absolute certainty unattainable in minute analysis of forms. The Kol affinities favour the opinion that *en*, *ne* was the original form, while the Australian and the still more remote and primordial affinities render it hardly doubtful that the most current agentive-form in the South *na*, *nga* with its variations in *o*, is the most archaic. Whether the three vowels *a*, *o*, *e*, were archaically flexional,—that is, marked different forms of the pronoun, agentive, oblique &c.—is considered in a subsequent page.

pronoun only, and it would simply carry into those forms of the 1st in which it occurs the idea of "you" in addition to the original "I", the Tamil *na-m* being thus literally "I-you"—i. e. "I and you." Its displacement of the *n* in such forms as the Telugu *me*, Karn. and Toda *am*, Gond *ma*, would be a flexional change of an ordinary kind. In the Telugu *me-mu* both the root and the definitive postfix are flexionally changed to *m*. Whatever may be the ultimate origin of this exceptional *m*, and whether or not it passed from the 2nd pronoun to the 1st, its true character, in the present condition of the formation generally, is that of a plural element confined to the 2nd pronoun and to the absolute or inclusive form of the 1st. Toda however presents a remarkable exception in its 3rd pronoun, which in the plural is *atam* or *adam*. This remnant of the undoubted use of *-m* as a plural definitive, and not merely as a form of the 2nd pronoun, when taken in connection with the Gangetic and Utraiidian remnants of a similar usage adverted to in a subsequent page, leaves little doubt as to its having been a very archaic plural particle in Dravirian, or in one or more of its branches. The phonetic identity of this archaic plural postfix with the archaic neuter (sometimes fem.) definitive postfix in *m*, *b*, *p*, *v* can hardly be accidental. The fem. *l* is also identical with the common plural postfix in *l*, *r*. The Karnataka pronouns have *-au* in the plurals of the 1st and 2nd persons and *-ra* in the 3rd as in the other languages save Toda (in Taluva *-ra* becomes *-lu*). This *-au* is identical with one of the forms of the neuter definitive. In the use of these particles the dialectic confusion and irregularity are very great, and it is difficult to determine their true primary functions.

The Vindyan languages present some remarkable dialectic peculiarities. The Gond and Khond have the common *a* forms of the 1st pronoun. The other northern languages in their agentive forms have only that contracted variety of the *e* form which is the separate pronoun in Taluva (*en*), and occurs also as a possessive and verbal form in Tamil, Malayalam and Karnataka, and the plural of Kurgi, the full form being found in Telugu *nenu* (pl. *memu*). In the more purely Dravirian Male and Uraon the Taluva form is preserved unmodified *en* Male, *enaa* Sing., *en* Pl. Uraon. So in the possessives,—Sing. Uraon *en-ghi*, Pl. Uraon *em-hi*, Male

em-ki. Male preserves other varieties also, as *om* Pl. (in addition to *na-m*) *ong-ki* poss. Sing. In the Kol dialects the vowel changes from *e* to *i*, *ing*, *eing*, *aing*, *inge*. These forms appear to preserve the original possessives of South Dravirian, to which in a later page I refer the *e*. It should also be remarked that the vowels *i*, *e*, *a* are definitives and definitive prefixes in Kol as in Dravirian generally. Compound vowels occur both as a simple definitive and as a possessive. Kol has *ia* or *ya* poss. as in S. Dravirian and it has *ayo*, *ay*, *ai* &c as a definitive or 3rd pronoun, identical with the Tuluva 3rd pronoun *aye* (so *ayi-no*, "this"). It is found also in Male. Compare the possessives *ai-ye* Bhumij, *ahi-ki* Male "his" &c. The change of *ai* into *e*, or *e* into *ai*, is easy, for *e* is but a condensed form of *ai*.

The Male and Uraon 2nd pronoun is the South Dravirian *ni*,—*niz* Male, *nien* Uraon. The Khond *inu* is Tuluva (pl.) which again is a contraction of the Karnataka *ninu*. Gond has the full form with its own def. postfix in oblique forms, *nih*.

Besides this form Gond has a peculiar agentive form *imma*, to which the Kol 2nd pronoun is allied, *am* Bhumij, *Mundala*, *um* Ho, *umge* Sonthal (*ami* poss.) The Kol duals and plurals present further variations of this labial 2nd pronoun, *me*, *m*, *be*, *pe*. Its probable origin is adverted to further on.

The Dravirian plural element *m* is found in Khond,—*anu* "I," *amu* "we," *inu* "thou," *mi* "you"; Gond *nah* "I," *mah* "we," *nuna* "I," *mar* "we"; so in the oblique forms of the second pronoun *nih*, S. *mik*, *meh* Pl., Male has *na-m*, *o-m*, "we," *e-m-ki*, *na-m-ki* Pl. poss., Uraon *e-m-hi* Pl. poss.

The Kol plurals in *m*, *b*, *p* represent the Dravirian plural labial. In the 1st pronoun the relative plural takes the common plural def. *-le*, and the absolute only has the labial, under the form *ba*,* conformably with the South Dravirian idiom.

It appears from these details that the original forms of the pronouns were *na* or *nga* "I" and *ni* "thou"; that *m* was a plural definitive originally generic but afterwards restricted save in Toda to the 2nd pronoun and to the plural absolute of the 1st; and that the ordinary plurals of all the pronouns were formed by the plural definitives used with nouns. The form of the 1st pronoun in

* In chap. IV. § 6. this form is not identified with the Dravirian plurals in *m*, but it is inferred that the labial element represents *be*, "you."

en is a dialectic variation which must have prevailed in the parent Kol dialect as in Tuluva. The Gond *inna* of the 2nd person is evidently a secondary form (in which *i* is the common pronominal element) as the regular primary form *ni* is preserved in the oblique cases. The allied Kol labial 2nd pronoun must be of similar secondary origin.

The Kol dialects distinguish the dual from the plural in pronouns, as in substantives, the dual form being given by annexing the nasal to the plural. Thus the substantive pl. definitive is *ko*, which in the dual becomes *king* [= *ko* + *ing*]; the pl. rel. of the 1st pron. is *alle*, which in the dual becomes *alleng*; the pl. of the 2d pron. is *appe*, which in the dual becomes *abben*. The dual particle is probably the Dravirian *en* "two" (the Uraon form) but it may be a variation of the Draviro-Ultrai Indian plural *el*, *le*, *li*, *ni* &c., the dual being indicated by plural particles in some other families (Semitic, Seythie &c.) as well as in some Australian dialects.* The South Dravirian dialects with Gond Uraon and Male, do not possess a dual.

Besides the indication of number and case, it does not appear that any other ideologic element is involved in the postfixes or flexions. The 3rd pronoun indicates sex by its postfixed definitives, the consonants being *n* masc., *l* fem. and *d*, *th*, *t* neuter. There are no clear traces either of these or of a vocalic distinction of sex in the proper pronouns, which is the more remarkable from the sex definitives having, in the archaic stage of the formation, been used with substantives, and from their being found largely concreted in all the vocabularies as well as still partially current. If any sexual function can be ascribed to the pronominal postfixes, it would appear that the common forms now in use are masculine, *-n* and *-nu* being the form of the postfix. If sexual forms were ever current, we might have expected to find some traces of a feminine form in the 2nd person, but *l* nowhere occurs as the postfix.

The variations in the vowel of the 1st pronoun to *e* and in that of the 2nd to *u* may have been glossarial. There are indications of this with respect to *e*, which however may have been the common phonetic variation of the final vowel found largely in the vocabularies. If, as seems more probable, it had a flexional power,

* In Australian the plural particle forms duals and one of its variations is *-le*.

it would appear to have been possessive (and oblique), as it is now found in all the Southern dialects, save Telugu, in those cases, or as the agentive postfix to verbs, which is radically possessive. In Telugu, by a dialectic variation, it occurs only in the nominative, the oblique cases taking the primary *a*. The Northern dialects, Uraon, Male, in their preference for *e*, follow Telugu, or more probably the Southern Tuluva, which has other special affinities with the Northern dialects including the Kol. It is probable from this that *a* (sometimes varied to *o*) was the proper nominative vowel, and that the substitution of the possessive *e* for it was a dialectic variation which spread from Telugu or Tuluva to most of the Northern dialects, or was internally produced by the loss of the ideologic distinction between the two forms. It is clear that the use of *e* in the possessive like that of *m* in the plural belongs to a very archaic condition of the formation or some of its branches. It is not probable that in any single branch there were originally two modes of indicating the plurals and possessives, and it is still less probable that both admitted of being combined. When we now find such combinations it is to be inferred that one of the particles is primary and the other secondary, the combinations having been produced by the blending of a foreign system of postfixes with the Dravirian or of two Dravirian systems previously characteristic of different branches of the formation. The antiquity and wide prevalence of the ordinary plural particles in *l*, *r* &c are proved by their occurrence not only in South Dravirian, Kol and Gangetico-Ultraindian languages but in Asonesia. But one branch may have originally possessed labial plurals. The possessive in *e* whether postfixual or flexional must have preceded the use of the superadded possessive postfixes. The most probable explanation afforded by the Dravirian particle system by itself is that the pronominal root *na* took the archaic possessive in *i* (*in*, *in* &c South Dravirian, Kol) and that this became *e* by the coalescence of the root vowel *a* with the definitive vowel *i* (*na-in=nen*). But even the current possessive has sometimes *e*. Thus in Tamil we find *ei*, in Malayalam *ye*, in Dhimal *eng* &c.

The *u* of the 2nd pronoun can hardly be explained as a merely phonetic variation of the radical *i*. In the Anc. Tamil it occurs in the full form *nu* in the possessive plural only *nu-ma-du*, the

singular being *ni-na-du*. If any inference may be drawn from this, it is that it is possessive and probably plural. In Mod. Tam. it occurs in the possessive both of sing. and pl. *u-na-du*, S. *u-ma-du* P. In the Kol dialects it is also found with a plural force under the form *bu* if my analysis of *abu* be correct. The absence of *e* or *i* in the possessive of the 2nd pronoun is accounted for by *i* being the root vowel of the pronoun itself. In Chap. IV. it was stated that "the objective appears to be radically *nu* or *un* which is probably a variation of the possessive" (*du*, *ru* &c.). Malaya-lam has *u-de* as well as *in-de* as composite possessives. The archaic possessive function of *u* in the former is attested by *in* of the latter. I would therefore explain the pronominal *un* and *un* as contractions of *ni-un*.

In the original system the roots and postfixes were free, and hence the same root admitted different postfixed or postplaced definitives. With the decay of this freedom, the variety in the definitives and the existence of double plurals, gave rise in the concretionary stage to considerable dialective divergency and some confusion, as in all other pronominal systems using originally several elements for the expression of distinctions in each person. In the closely connected Southern dialects these variations are very marked, and in the Northern they take a still more irregular and seemingly capricious character. In the Tamil 1st person we find the concreted forms *yan*, *nan* in the singular agentive, but in the singular possessive *ena* or *en* with the corresponding plurals possessive *ema* and *nama*. (I omit the poss. postfixes *-du*, *-de*, *-di* &c.) In the 2nd person we have *ni* both in the agentive and possessive of the "Ancient" dialect, but in the "Modern" *un* or *una* in the possessive, corresponding with the plural possessives in both *nuna* Anc. (the full form), and *uma* Mod. In disintegrated and concreted systems, the original force of the secondary elements passes away, and hence serviles come to replace roots, one form to be substituted for another, generic definitives to receive a special restricted use, special definitives to be generalised or to be clothed with a new special power &c. Thus in Telugu in the singular the definitive *-nu* has become concreted with the 1st pron. and *-vu* with the 2nd, while in Karnataka *-nu* retains its position in the singulars of both and *-vu* is plural in both. Hence *nieu* is "thou" in Telugu but "you" in Karn. The Telugu plurals are

equally irregular and cumulative, for the 1st person takes *-nu* in addition to the flexional labialising of the root itself (*memu*), while the 2nd not only labialises the root but adds an ordinary plural definitive (*miru*). The poss. presents yet another form of the 1st person *na*-sing. *ma*-pl. The sexual forms of the 3rd pronoun show similar changes. The proper forms are *va-n*, or *va-nu* masc. *va-l*, or *va-lu* fem. and *du*, *da* or *di* neut. postfixed to the def. But in Telugu *-du* has become masc. (the neuter being varied to *-di*). In Karnataka the masc. has become *va-n* and in Telugu the fem. has become *a-me*. I have already remarked that Telugu also reverses the ordinary functions of the vowels in the 1st person, *e* being agentive (*ne-nu*) and a possessive (*na-yoku*). As in Semitico-African and Indo-European languages, the postfixed agentive forms of the pronouns in some cases echo the definitive and not the pronoun.* This is almost uniformly done by Telugu, the 1st person postfixes *-nu* (from *ne-nu*), the 2nd person postfixes *-vu* (from *ni-vu*), the 3rd masc. *-du* (from *va-du*), the fem. *-di* (from *a-di*, now neut.) and the neut. *-thi* (from *a-thi*). The conereted definitives of nouns show variations similar to those of the pronouns. Some nouns have the same definitive in all the dialects. Some have a masc. postfix in one dialect, and a fem. in another.

In the Northern languages the dialectic irregularities are still greater than in the Southern, Gond having for "I" the forms *na*, *nu*, *no*, *-an* S.; *ma*, *mo*, *-um* Pl.; and for "thou" *im*, *ni* S.; *im*, *mi*, *me* Pl. Male and Uraon have similar varieties. Male en "I", ong poss. Sing., *na-m*, *o-m* Pl., *em* Pl. poss., Uraon en-, eng- "I", *em-in* Pl. poss. The Northern forms in *o* resemble the Todava one, *on*, *won* Sing. *om*, *wom*. Pl. Todava frequently replaces the *a* of other Southern dialects by *o* (e. g. "eye" *kon* Tod., *kan* in the other vocabularies; "milk" *por*, for *pal*; "six" *ore*, for *aru*).

In the Kol dialects the Dravirian roots are still further confused.

The foreign affinities of the Dravirian pronouns, are of two classes, the first embracing those indicative of an archaic extension of the formation beyond the present Dravirian province and the

* The Kol *te* "we", *be* "you" are examples of the plural particles taking the place of pronouns.

second being of a primordial character and pointing towards the derivation of the formation itself.

The pronouns clearly indicate an early prevalence of the archaic Indian formation over Ultraindia and Asonesia, and the forms in which they are found in these regions show that the proper South Dravirian varieties are the oldest and purest, and were first and farthest spread to the eastward. They are found in all their integrity throughout the Australian sub-formation,*—the most ancient in Asonesia—and fragments of them are also preserved in other Asonesian provinces. The dialectic Kol system, on the other hand, is found in its integrity in the Mon-Anam formation, the oldest that is extant in Ultraindia, while it is also partially traceable in Asonesia.

The Australian pronouns are nga "I" and ngin, nin, ngi "thou," with postfixed definitives as in Dravirian, *-nya, -ni, -ngi, -na, -te, -toa, -du, -pe, -i*. Comp. the Drav. *-nu, -na, -n, -vu*, and the common noun definitive postfixes. The common form of the 2nd pronoun, nin, is the Dravirian root combined with the contracted Dravirian postfix as in Karnataka, Kurgi and Male nia. In the Australian system the plurals are formed, like the ordinary Dravirian ones, by the plural postfixes, the Dravirian special *m* plurals being absent unless they are represented by *-wa*. Australian has a distinct dual formed by a Draviro-Australian plural particle *-li, -le, -dli, -lin*, &c 1st pron., *-rang, -ra, -rle*. &c 2nd pron. The 2nd has also *-wa* and the compound *-wala* in some languages.

The Tobi nang, Ulea ngang, Pelew nak, Banabennai, Tarawangai, [Austr. ngai], Rotuma ngo, ngou, and the Sumba *nyungga* of the 1st person, with the Onni ono, Tarawa ungoe, ngoe of the 2nd person, are also Draviro-Australian.

The indication of sex in the 3rd pronoun distinguishes Tarawan and Australian from the proper Malayu-Polynesian languages and is one of the traits that connect the archaic pronominal system of Asonesia with the Dravirian.

Although the plural forms in *m* are absent in Australian, it has absolute as well as relative forms of the plural of the first person.

* The first indication of resemblances between the Dravirian and the Australian pronouns is due to Mr. Norris.

In some dialects the former are produced by the union of roots of the 1st and 2nd persons. The latter is represented by the dual forms only. In the Malayu-Polynesian languages the two plurals and also the dual are found, and as they are not now Malagasy, although found in Semitico-African languages, they may be Dravirian traits. In some languages the dual and relative plural are not distinguished.

The general character of the most ancient Asonesian pronominal system—as preserved in various degrees in the Australian languages, in Tarawan, Vitian, Tanan, in Polynesian and in some of the less impoverished Indonesian languages—is similar to the Dravirian, but it is more archaic, more complete and less concentered. The different elements are more numerous and more freely and regularly combinable. In the Australian system we find not only all the forms that are now extant in South Dravirian, as well as the dual and the peculiar transition or agento-objective forms of Kol, but several others produced by the same power of compounding elements in which these originated. This power is much less impaired in Australian and the allied Asonesian systems, and the inference is that in this, as in several other respects, they better preserve the archaic Indo-Asonesian type, and may hence suggest to us what the condition of Dravirian itself was before its forms had become diminished, confused and concentered as we now find them. In Australian the pronominal roots are compounded with definitives, singular and plural, with the numeral “two” to form duals, with masc. and fem. definitives in the 3rd person, and in all the 3 persons with each other, thus producing not only absolute and relative plurals of the 1st person, but several other complex plurals. The Viti-Tarawan elements are still more freely compounded and their forms of this kind are consequently more numerous. The incorporation of numerals appears not to have been confined to “two,” for in some of the Papuanesian languages a trinal is found, and in Polynesian the same form has lost its original meaning and become a generic plural. This highly agglomerative but crude pronominal system has not been derived from Malagasy, and its presence in Asonesia is attributable to a prior formation, of Indian origin, similar to the Dravirian but

more rich in forms because simpler and less concreted. It thus carries back the Dravirian type to a condition analagous to the American. To illustrate these remarks by going into details would be to anticipate so far the ultimate aim of our examination of Dravirian and the other S. E. Asian formations, and I must therefore refer the reader to the subsequent section on Australian.

The merely glossarial connection between the Dravirian and the Australian systems embraces the pronominal roots, several of the agentive postfixes, plural postfixes and perhaps some vocalic flexions of the roots. The 2nd pronoun in several dialects changes its proper vowel *i* to *u* in the dual and plural. In some the *a* of the 1st pronoun becomes *e* in the plural. In Australian as in Dravirian and other compound agglutinative and partially concreted systems, the pronoun is in some forms replaced or represented by other elements, definitive, numeral &c.

The sexual distinction between the definitives *n* and *l* is not found in the known Australian languages or in Tarawan. The 1st and 2nd pronouns do not take sexual postfixes, a fact telling against any surmise that Dravirian may have had them in an early stage.

The North Dravirian pronouns evidently preceded the Tibeto-Burman in the Mon-Anam languages and in Ultraiidia generally. They are preserved in the pre-Malayan basis of the languages of the Malay Peninsula—Sĭmang as well as Bĭnua—and they have also spread to the Eastern Islands. The most common form of the 1st pronoun is similar to the Kol *ing*- with its variations *eing*, *aing*, *inge*—which is a liquid modification of the prevalent South Dravirian possessive *en*, occurring also in Uraon (*eng*). Both the Southern and Northern Dravirian *en*, *eng* and the Kol form *ing*, which is probably the original, are dispersed amongst the vocabularies of South Ultraiidia and the Malay Peninsula, *en* Sĭmang; *eng* Chong, Kambojan; *eing*, *ein*, *ye* Sĭmang; *ain*, *oin*, *yau* Bĭnua; *oei*, *oe* Mon. In Indonesia the North Ultraiidian form is perhaps found in Sunda *zing*, but this may be a Niha-Polynesian prefix with the true pronominal root elided. The Timor *ani* and Kissa *ba-nian* are probably connected with it. The Sumba *nyu-ŋga* is South Dravirian and Australian in form, but Gond has *nu-na*. The prevalent Niha-Polynesian forms of the 1st pronoun are not Kol.

The Kol 2nd pronoun—which is much more persistent and widely spread in the Mon-Anam languages than the 1st—is very remarkable, and at first view anomalous, in its form. It is a labial, occurring under the forms *inna Gondi* (agentive), *am, um, umge, me, m, he, pe Kol*. In the Himalayas the Kiranti *am* of the possessive *am-ko* is the only example of this root or form. In Ultraiidian it is *Mon pueh, pi, bai; Kasia, me, pha; Anam, mei; Lau, mung, mau, mo; Chong bo; Simang, mo, bo; Traŋ-ganu mong*. The form is rarely found in Asonesia in the agentive singular, which in the Niha-Polynesian languages, is, like the 1st pronoun, of Semitico-Libyan derivation through Malagasy. In the Timorian group,—which preserves the N. Dravirian 1st pronoun in some of its languages and has other N. Dravirian traits—we find in the singular *mue Solor, nyu mu Sumba*, (*nyu* definitive as in the 1st pron. *nyu-ngga*, which is also Dravirian). It is common in the Niha-Polynesian languages as a possessive under the forms *mo, mu* sometimes *mi*. It is found in the plural, either by itself or combined with another particle. It also enters into the exclusive or relative plural of the 1st pronoun.*

In the N. Ultraiidian and Mon-Anam languages it is exceptional as a root for the 2nd pronoun, none of the pronominal systems of the formations with which they are connected, or which are found in Eastern Asia, using a labial root.† The *nang, neng* of the Chino-Tibetan and Ultraiidian system is variable in Burman to *mang, meng*, but this mutation of the *n* of the root is confined to it, and its absence in the adjacent dialects of the same sub-formation, the forms of the pronoun in the conterminous Mon, and the recent Ultraiidian spread of Burman even when compared

* But as the *m* element may in some cases be the so-called companionative or may be a direct engraftment from the Dravirian plural of the 1st pronoun in *mi &c.*, it is enough at present to remark the prevalence of *mu, mo, mi* as a subsidiary root for the 2nd pronoun in Malaya-Polynesian. That as such, it is a Dravirian or Draviro-Ultraiidian engraftment on the Malagasy-Polynesian or Oceanic system is clear from its being absent not only in Malagasy but in the present Semitico-Libyan system.

† Although I consider the explanation in the text the correct one, it should be remarked that several of the Ultraiidian forms of the Scythico-Australian labial third pronoun and definitive have a close resemblance to varieties of the labial second pronoun, and that in some formations these two pronouns involve the same definitive. This is the case in Tibetan, Semitico-Libyan, Indo-European, Lægian and Sarcoidæ. Comp. *mung* "thou" Siamese, *mung*, "He" &c. Kambojan; *pi* "thou" Mon, *ke, pike* "he &c." Kambojan; *ma* "he &c." Dophia; *bo* "thou" Chong, Simang; *wo* "he &c." Simang, Newar; *bu, Miri* &c. &c.

with the Naga-Manipuri branch of the same family, shut out the supposition that this accidental form was the parent of the archaically diffused Mon-Anam, Vindyan and Asonesian pronoun. As the latter is neither Chinese, Tibeto-Ultraindian, Tatar, nor Malagasy, we are thrown back on the system to which the 1st pronoun belongs, and the widely prevalent plural power of the form in the Nila-Polynesian languages suggests that it is simply a Dravirian plural used for the singular, as happens in many other languages with the 2nd pronoun (e. g. the English "you" for "thou"). In Dravirian we find amongst current forms for "you" *miru* Telugu, (*midi* poss.) where the plural *m* displaces the *n* of the root, (*ni*, *niru*) as in the plural of the 1st pronoun, e. g. Telugu *nenu* "I", *memu* "we," Toda *an* "I", *am* "we". Tamil *emadu*; "ours", *umadu* "yours". With these compare the Khond *anu* "I", *amu* "we"; *inu* "thou", *mi* "you", the last term being identical with the Telugi *mi* of *miru*. The nearest South Dravirian forms occur in Toda *ni-ma* Pl. and Karnataka *ni-m* Pl., (Anc.), *ni-vu* (Mod.); *ni-ma-du* Pl. poss. (Mod.) The Gond *i-ma* is evidently a contraction of *ni-ma*. In some of the southern forms also, the root of the second pronoun is represented by the vowel only. The Kol variations of the proper radical vowel *i* to *u* and *a* are found in some of the southern languages. In Kol the singular forms are *um* (as in the Tamil Pl. poss. *umadu*) *am*, (as in Toda *nama* Pl.), *me*, *m*, variable in the plural composite terms to *bu* (comp. S. Dravirian *vu*), *be*, *pe*. The connection between these and the Ultraindian *mo*, *bo*, *pi*, *mong*, *mung* &c. is obvious. The Telugu verbal postfix of the 2nd pronoun *-vu* exhibits the same substitution of the plural definitive for the pronoun. In the Semitico-Libyan system, in which *m* has a plural power as in Dravirian, like examples occur of the replacement of the root by the plural particle. The Kol *le* "we" is another example.

Of the Kol forms *um*, *bu-am*, *me*, (*be*, *pe*)—corresponding with the South Dravirian *um*, *vu*, *am*, *mi*—the first is the most widely spread in Ultraindia and Asonesia in the forms *mu*, *mo*, *bo*, *mung* &c. In South Dravirian it is rare, but its occurrence in the possessive plural of Tamil (*um*) and in the plural of Karnataka (*vu*) places its Dravirian origin and antiquity beyond doubt.

The distinctive vowel *u* is found in the Tamil singular also (*un*).^{*}

Dravirian pronouns and pronominal traits are also found in the Gangetic and North Ultraindian languages. But as the Tibeto-Ultraindian pronouns are themselves radically the same as the Dravido-Australian, and as this radical agreement belongs to the most archaic pre-Indian affinities of Dravirian, it will be noticed in connection with these. For various examples of Dravirian traits in the Gangetico-Ultraindian systems I may refer to chap. IV. Here I shall only mention one, as it is illustrative of the archaic use of *m* as a plural definitive.

The Naga pronominal system—which is a Tibeto-Burman superstructure on a Dravirian basis—preserves the Dravirian plural postfix in Namsangya *ni-ma* “we,” *ne-ma* “you.” The possessive of the 1st pron. sing. and pl. is *i* (from *ni* “I,” originally possessive now replaced by the Tibeto-Burman *nga* as a separate agentive term) but that of the 2nd pron. sing. as well as pl. is *ma* (from *ne-ma*). In Tengsa Naga *me* occurs as the 2nd pronoun in the possessive *mechi*,—the separate form being the common East Tibetan *naŋ*. In Joboka Naga *m* is retained as the plural postfix although the roots are changed, 1st *ku* Sing. *kem* Pl.; 2nd *naŋ* Sing. *hanzam* Pl.; 3rd *chua* Sing. *hom* Pl. It will be remarked that while Namsangya like the Dravirian languages in general restricts *m* to the proper pronouns, Joboka like Toda extends it to the 3rd also. The only other Gangetico-Ultraindian language in which this particle appears to be found is the Gurung which has it in all the three pronouns under the form *-mo*. The Newar *-ping* is probably another variety of it. The Mozome Angami Naga *-we* of the 1st pronoun resembles Kol forms. In Angami *ma* appears to be combined with the liquid plural particle of Dravirian in all the pronouns *-ra-ma*. In Garo mong (comp. Gurung *mo*) and *ma* occur as plural elements, and the Burman labial plural may be the same particle.

* [Prof. Max Müller's table of pronouns supplies two additional examples of the use of this form. In the Malabar dialect of Malayalam, the oblique form of the singular is *um*-(with postfixes), while the plural has both *un* and *um*. In Bralou the nominative plural is *num* (oblique *numu*). It is abundantly evident that both *ni* and *nu* must have been current as forms of the second pronoun from a very remote era of the Dravirian formation, and that the Kol forms and their Ultraindian derivatives, so far from being really exceptional, are more distinctively and undoubtedly Dravirian than they might have been considered had they adhered to the common agentive forms of the South, and thus resembled the Tibeto-Ultraindian forms with which they are intermixed in several Gangetic and Ultraindian languages.]

The second class of pronominal affinities appear to appertain to the more archaic or pre-Indian history of the Dravirian or Draviro-Australian formation. They are very numerous if those of each pronoun be considered separately. But the formations which have both of the Dravirian pronouns are much more limited. The simple roots are found best preserved in Chinese and in some of the more archaic or preSeythie languages of America. The only other system in which both occur as the principal terms is the Tibeto-Ultraiidian. These facts and the distribution of the different varieties of the roots in these and in other formations, lead us to the conclusion that the system is probably the most archaic and least mixed that is now extant. The Draviro-Australian forms stand in the same rank as the American in relation to the Chinese. Like American and proto-Seythie they belong to a secondary, harmonic, and post-positional formation, and not to a primitive and generally prepositional one like Chinese. They have definitive postfixes like American and Seythie and the full terms are in structure more immediately allied to the Seythie. The three formations stand on a similar footing in relation both to the primary Chinese formation and to the earliest harmonic development which it received. As regards the roots in particular, the Draviro-Australian *na* or *n̄ga* and *ni* or *ngi* have a more direct and complete affinity with the Chinese *ngo* and *ni* than the pronouns of any other system.

The adjacent Tibeto-Ultraiidian* system is also Chinese and the 1st pronoun has the Draviro-Australian vowel *a*, which appears to have been early and widely prevalent, for it is found in some American languages (*nai*, *nan* &c), Korean (*nai*, *na*), Samoiede

* In chap. IV I considered the original or integral Gangetic-Ultraiidian pronoun system to be fundamentally Dravirian and distinct from Tibetan, although different languages present modifications and intermixtures. Thus the Naga was held to be a compound of Burma-Tibetan, South Ultraiidian and Gangetic-Dravirian traits. The remarkable extent to which the roots and forms of different formations have been blended in the Ultraiidian systems will appear when we examine the pronouns of the Mon-Anam or prepositional alliance. The publication of Mr Hodgson's East Tibetan or Sitan vocabularies has not affected the general inferences at which I had arrived, but they have made an important modification in details. The 2nd pronoun in *n* I considered to be Dravirian in all the Gangetic and Ultraiidian languages in which it occurs, the Tibetan root being totally different. It now appears that the East Tibetan or Sitan 2nd pronoun is also a form of the *n* root, similar to forms found in Ultraiidian and Gangetic languages that have numerous other glossarial affinities with East Tibetan. In the text I have introduced the necessary modification of my former view.

(na, but this is probably a variation of the Scythic ma), Caucasian (na, Kasi Kunuk), and Semitico-Libyan (na, also no, nu, ne, ni, that is, all the vocalic varieties of which instances occur in Chinese, Dravirian &c.) The Tibeto-Ultraiidian 2nd pronoun has also the broad form nan, na (the West or proper Tibetan has a different root), thus directly connecting itself, not with the slender forms of the adjacent Chinese and of Draviro-Australian, but with the archaic Scythic nan, na (Ugrian). The numerous Ugrian and other Scythic and N. E. Asian affinities of the Tibeto-Ultraiidian vocabularies render it probable that this form of the 2nd pronoun is of archaic Ugrian origin. The Dravirian slender *i* form and the *n* form are also Ugrian, ny, ny, *nyngi*, *nyn*, *num*. The affinity between the Ostiak form *nyn* and the Draviro-Australian *nin* is obvious. The nasal second pronoun is not the prevalent Scythic, Indo-European and Semitico-Libyan, form, which is in *t*, *s* &c. If the Scythic *m* of the 1st pronoun was an archaic variety of *n*—which is found in Scythic, but as a flexion of *m*—the demonstration of the affinity of proto-Scythic, with American on the one side and with Draviro-Australian and Tibeto-Ultraiidian on the other, and of the derivation of the common roots of all from the Chinese formation, would be complete. Although it is clear that the Draviro-Australian pronouns are not derivatives from the Tibeto-Ultraiidian, but are to be considered as having like them an independent connection with an archaic Mid-Asiatic system—Chinese in roots and Scythic in form—it necessarily happens that the forms of the common roots sometimes so closely resemble each other that it is difficult to say what their true origin is in certain of those Indian languages which are placed at the junction of the two formations and have other affinities with both. The Tibeto-Ultraiidian *nga* of the 1st pronoun becomes in different languages *ngo*, *ngai*, (comp. Chinese *ngai*) *ngi*, *nge*, *nye*. It is distinguished from the full and more prevalent Dravirian form, not so much by the liquid nasal (*ng* for *n*) which is also Malayalam, Kol and Australian, and appears from Chinese to have been the primary form, as by the absence of the definitive postfix. But the contracted and slender Dravirian varieties *an*, *en*, *eug*, *ing* are little distinguished from Tibeto-Ultraiidian forms such as *ngi*, *nge*, *nye*, and it thus becomes difficult in all cases to decide whether varieties like the Mikir *ne*,

Naga ni, Bodo and Garo ang, anga &c, are Tibeto-Ultraiidian or Dravirian.*

The chief distinction between the Tibeto-Ultraiidian and the Draviro-Australian systems consists in the combinations, agglutinations and flexions which are found in the latter. But there is also a real difference in the forms of the roots. The proper form of the 1st person in Tibeto-Ultraiidian is still *n̄ga*. This was no doubt the original Indian form also, but from a remote period in the history of Dravirian as an agglutinative formation, modifications of this form have prevailed, the principal being *na*, *ne* or *en*, *ing* and the contractions *e* and *i*. When East Tibetan languages came under the influence of Dravirian phonology similar forms might be produced in them, but in general such forms appear to be of true Dravirian origin. It is not at all probable that so great a transformation as that of *n̄ga* into *i* took place in any purely Tibetan language, while the archaic prevalence of *e* in Dravirian and its original identity with the *e* of *en*, *eng* are certified by numerous facts in different languages. When therefore we find in the obviously compound Naga system, with its flexional Dravirian traits, not only the true Tibetan forms *nga* "I" and *nang* "thou" [Gyarung 1st *nga*, 2nd *nan*-] but in the plural 1st *ni* and 2nd *ne*, and in the possessive 1st *i* and 2nd *ma*, there can be no doubt that *ni* and *i* are remnants of a Dravirian form of the 1st pronoun similar to the oblique South Dravirian, to the Kol and Limbu, and to the allied forms found in the older or prepositional languages of Ultraiidia. Other Gangetico-Ultraiidian examples

* The comparative table of the Dravirian pronouns will show the great difficulty of distinguishing between the Dravirian and the Tibeto Ultraiidian terms. I am by no means satisfied that the classification is correct in all cases. Some of the Himalayan and Ultraiidian forms are, in mere phonetic form, as much allied to the southern as to the northern group. The principal facts that have guided me are these. The southern forms of the 1st pronoun in *i*, *e* have been produced by the incorporation of the possessive particle *i* &c, with the pronoun. They are consequently found regularly in the singular. The Tibeto-Ultraiidian forms in *i*, have been produced by the incorporation a Szechuan and East Tibetan plural particle, *ni*, *i*, (see Horpa) with the pronoun, as is evident from this particle remaining as a postfix in several languages. The Himalayan and the allied Ultraiidian forms in *i* are consequently found regularly in the plural only. Hence I consider the singular *ninga* Milchanang, *inga* Milch., Limbu, to be allied to the Dravirian *ing*, *eing*, *eng*, *en* &c, and not to the plural Garo *ning*; and the plural *ni* Serpa, and Limbu, *ni* Kiranti, *ni* Marma to be distinct from the singular *ning* Ho, *ni* Binnu &c. A few forms in *e*, obviously Tibeto-Ultraiidian (Takpa, Khawari Tibetan, Mikir) are attributable to the pure phonetic tendency to replace *a* by *e*, found in some of the Tibeto-Ultraiidian languages, as is more fully noticed in the next chapter.

of Dravirian forms occur in the Milchanang and Limbu inga (identical with Kol and Mon-Anam forms), Garo ning and Singpho i (both Pl.), Mikir ne, Nagaung Naga nyi, Khari ni and the Naga forms noticed in a previous page.* The Angami a [Manyak also] and the Gangetico-Ultraiidian ang (Bodo, Garo), angka Kiranti are probably East Tibetan. The 2nd pronoun is more strongly distinguished in the two systems by its radical vowel, which in Draviro-Australian is i as in Chinese, while in Tibeto-Ultraiidian it is a, as in some of the archaic Scythic forms. The Ultraiidian members of the Tibeto-Ultraiidian family show other Dravirian affinities in their pronominal systems besides the occasional adoption or retention of Indian forms of the roots. Dravirian plurals, possessives and other particles occur in several languages, Bodo, Dhimal, Naga &c (see chap. IV.) Not only the common Dravirian plurals in l &c are found, but, as we have seen, the pronominal m.

Amongst the primary affinities of the S. E. Asian languages and Dravirian may be included the plural *m* and the possessive in *i*, *ni* &c. The former is Chinese -mun, -men, -me, -mei, -pei and the latter is Tibetan (yi), Manyak (i), Burman (i), Limbu (in), Bodo and Garo (ni), as well as Scythic, Semitico-Libyan (i) Zimbabwian (i) &c. The Chinese traits in the Himalayan and Ultraiidian languages present great difficulties. Some are of comparatively recent East Tibetan origin and in Ultraiidia even more modern. Others appear to belong to a connection as archaic as that between Australian and Chinese roots.

The Draviro-Australian or archaic Indo-Asonesian proninalom system with its numerous distinct elements and combinations, appears to be more ancient or less impaired than most of the systems of other harmonic formations of the Old World. From its general structure it must be considered as cognate with proto-Scythic or Scythico-American. It is richer than Scythic, which has neither sexual forms nor any plurals save the ordinary generic ones, with the absolute "we" (formed as in Dravirian), although the Scythic power of combining such elements as the formation possesses is similar to the Draviro-Australian, and the position of the subordinate definitives is the same. In some of the

* [Brahui i.]

Seythic languages a dual is found (*ante* vol. viii. p. 70),* and as it is preserved in Kol, Australian &c. it was probably common to the archaic Seythic and Indo-Asonesian systems. Double plurals occur in Seythic as in Dravirian. The transition forms of Kol and Australian are absent, but the Fin reflexive forms may be considered as analogous remnants of an earlier and richer condition of the Seythic system, when it had departed less from the Semitico-African types on the one side and the American on the other. The Seythic, Caucasian and Africo-Semitic habit of postfixing the pronoun possessively is preserved in the Kol pronominal postfixes to names of kindred and in the ordinary Dravirian persons of the verbs† (*ante* vol. viii. p. 58). The Seythic postfixed *n* definitive of the singular is Draviro-Australian. The plural definitives in *l*, *r*, are also common to the two formations‡ but the regular *m* plurals—flexional and postfixual—of Dravirian are not Seythic. In some Ugrian languages the 1st pronoun has the *n* form in the singular and *m* (the root) in the plural, the former being evidently the definitive postfix left on the elision of the root; and as *m* does not occur in the plural of the 2nd pronoun it cannot be considered that the Dravirian plural *m* has any Seythic affinity.§ The Seythic plural def. *k* is found in Gond (*-k*, *-nh*, *-g*) and Kol (*ko*). In the Gond pronouns, as in some substantives, it is common and this is also the case in some Ugrian systems (*nanh* Wogul) and in Semitico-Libyan. Combined with the *l*, *r* plural it is found in most of the Dravirian languages (*-kal*, *-gal*, *-kulu*, *-kan*, &c., so *-galai* Dhim., *-khala*,

* [It would appear that the dual is not limited to Lap. for according to Castrén it is found in Ostiak and Samoiède also. It is formed by the guttural postfix *ga*, *ka* &c., which Castrén derives from *ka* or *ki* "also." But is it not identical with the plural guttural particle (*ante* vol. viii. pp. 56, 70)? "In the Irtsikian dialects of the Ostiakian, in Lapponian and Kamassian nouns and adjectives have lost the dual, and pronouns and verbs only have retained it. In the Samoiéd-Ostiakian it is the pronouns that have lost the dual." Prof. Max Muller in Bunsen's *Philosophy of Universal History*, vol. ii. 461].

† The Asonesian habit of postfixing the pronouns possessively is mainly referable to a Semitico-Libyan source, through Malagasy.

‡ The Dravirian plurals in *nar*, *mar*, are probably connected with the Seythic *nar*, *tar* (Mongol, Turkish). Those in *ru*, *la* are also African, and in Asonesia are thus common to the Dravirian and to the Malagasy derivative formations.

§ The traces of a libtal plural in Seythic are too obscure to be relied on. The Lap. has *p*, *b*, vs a plural postfix, also dual, and in the 1st pron. *-ne*, *-n* is dual. These phonetic affinities with Kol do not appear to me to indicate any glossarial connection. The dual *n* of the 1st pronoun is evidently the ordinary Ugrian flexion of the pronominal root *m*, or it is the definitive left as its representative on contraction as in the Hungarian separate form (*en*).

-kara Naga, combinations resembling the Samoiede, N. E. Asian and American gada, ganda &c. The Scythic systems in their vocalic flexional plurals and some other traits, are rather Indo-European, Semitico-Libyan and Zimbrian than Dravirian in their affinities. But we have seen that Dravirian has some traces of vocalic flexion in the change of the agentive a, o of the 1st pronoun to e in the possessive, and in that of i to u in the 2nd.*

The two systems cannot be referred to the same formation, and the affinities, great as they are, must be considered as collateral. They point to a common source, to an archaic postpositional formation at once more crude and more redundant in forms and combinations than Ugrian, Dravirian or even Australian.

The Indo-European system in its possession of a dual number and of sexual definitive postfixes and flexions which extend to the 3rd pronoun, but not to the 1st and 2nd, resembles Draviro-Australian in some of the characters in which it is richer than Scythic. Dravirian in its retention of the sex distinction in the 3rd person of verbs is less abraded than Indo-European. In other respects the latter system is, in its basis form, analogous in roots and structure to the Scythic, although somewhat richer, and has no general affinities with Draviro-Australian save what are observable in Scythic. It is more concreted and flexional than either, although similar flexions and irregularities occur in all three.

The Semitico-Libyan system like the Indo-European, has dual and sexual elements, and in the latter it is richer than either, for it uses them with the 2nd pronoun, and there are even traces of them in the first. The union between the pronominal elements and words used assertively, is more complex than in Indo-European or Scythic, as it has objective or transition forms like Draviro-Australian. The root of the 1st pronoun is Draviro-Australian, but that of the 2nd is not. The postfixed definitive k of the 1st person assimilates the term to the Gond forms in k (nak &c.) The Gond -k although now used in the singular is properly plural and Scythic, while the Semitico-Libyan is generally singular and probably masculine, but in Hottentot it is plural both in the 1st

* The Ugro-Fin definitive of the singular changes its vowel to u in the oblique cases (e. g. *mi-na*, *mi-nu*). This may be related to the Dravirian change of the root-vowel i to u in some possessives and plurals. In many of the Semitico-African languages u is plural.

and 2nd pronouns. The fact of both formations having *a* as a plural, * *i* (variable to *e*) as a possessive, and *u* as a plural element can hardly be accidental, but the affinity belongs to the most archaic period in the history of the two formations, like others that will be noticed afterwards. The common radical elements, with the agglutinative and flexional tendencies under which both formations have been developed, have produced several coincidences amongst the various forms which have concentered in both. Thus the possessive *i* or *e* represents the 1st pronoun in several Semitico-Libyan languages as a verb postfix or prefix. The Mahrah pl. of the 1st person *abu* (comp. Hausa *mu*) is similar to Dravirian forms (*abu* pl. absolute of Kol, &c.)† The Dravirian formation has radical affinities with the archaic ones of S. W. Asia, where it departs from S. E. Asian and Scythic in roots or forms, and although these identical pronominal terms have been independently formed in both formations, the coincidence cannot be considered as purely accidental when it rests on a community of roots and, to a certain extent, of ideologic and phonetic tendency also.

The Caucasian pronominal systems preserve affinities to those of formations in nearly all the great stages of development. The roots are varied and mixed. The Iron in, an, on sing. of the 1st pronoun and the Kasi Kumuk *na* are not Scythico-Iranian but Semitico-Libyan, and Draviro-Australian. The plural *ma*, *am*, *ab* is also phonetically, Semitico-Libyan and Dravirian, but it does not occur in the 2nd pron. and is probably Scythic glossarially. The root of the 2nd pronoun *di* &c. is ultimately a variety of the Chino-Dravirian *ni* but more immediately connected with Scythic &c. Caucasian has transition forms and attaches the pronoun possessively and assertively to other words, but it wants the complex duals and plurals as well as sex definitives or flexions. The nature and historical import of the affinities between Caucasian and Dravirian are considered elsewhere.

* As a definitive postfix the labial is *neuter* and sometimes feminine in Dravirian as in Sanskrit. In Semitico-Libyan it is plural and *masc.*

† The Semitic plural and dual (Arabic) *n* definitive may possibly be connected with the dual *n* of Kol. In Semitico-Libyan languages it is variable to *d*, *i*, *r*, *ni*, *ni*, &c. and appears to be radically the same as the Scythic and Draviro-Australian plural element in *i*, *r*. In Gangetico-Ultratindian languages *ti* becomes *di*, *ni*, *nin*, *ning*, &c. Horpa also has *ni*. In the purer Scythic languages the reduplicated *lar*, *ler*, of Turkish becomes *nar*, *ner* in Mongol. *N* forms are also found in Yeniseian (*u*, *ug*,) and Yukaghir (*i*, *n*,) (*ante*, vol. viii. p. 55 56.)

Euskarian in the Seythic, Caucasian and Semitico-Libyan characters of its pronominal system has necessarily Draviro-Australian affinities also. The transition tendency is archaic Semitico-Libyan, Georgian, Zimbian, Australian, and American. The roots are varied and *n* is found in both the 1st and 2nd pronouns, but without indicating any special connection with Draviro-Australian.

The Zimbian pronominal system is in many respects even richer than the Australian, but the roots are Seythic and Caucaso-Yeniseian combined with Semitico-Libyan and numerous as the general affinities are, there are no special ones with Draviro-Australian.

It is only in American that we find examples at once of a free and multiform combination of pronominal elements similar to the earlier Draviro-Asonesian, and of systems which, with this archaic richness of terms, preserve the Chino-Dravirian roots. In some American languages the extent to which pronouns combine with each other and with different definitives is still greater than in the outlying or insular members of the Draviro-Australian formation. As traces of a similar primitive freedom of combination, are found in most of the harmonic Aso-African systems, it is probable that a pronominal development analogous to the American was the ultimate source of the Seythico-Iranian, Semitico-African &c. and that the remotest and most sequestered branch of the Indo-Asonesian formation has remained more faithful to it than the exposed continental systems.

The close connection between the general structure and ideology of the Dravirian and Seythic formations and the large glossarial affinity give additional importance to the fact that the Dravirian pronouns are not the predominant Seythic ones. The prevalent Seythic 1st person is a labial, *ma*, *mi*, *bi*, &c, and the 2nd a dental, *sa*, *si*, *ti*. These are Iranian and Caucasian, the 1st being also found in Zimbian and the 2nd in Semitico-Libyan, N. E. Asiatic, and American languages. Both are evidently very archaic, but their diffusion over the Iranian, Seythic, and connected African area must have been later than the spread of the Draviro-Australian and allied American terms which centre in the Chinese. The fact of the latter being found in widely separated and outlying ethnic provinces—America, N. E. Asia, Africa, S. India, Australia—

combined with that of the Scythic and Iranian being the latest of the great migratory races, establish a high antiquity for the movements which dispersed the Dravirian pronouns on all sides from their probable centre in S. W. Asia.

The Chinese is probably the most ancient integral formation to which they can be referred. They appear to have been diffused over a large portion of Asia and Africa as well as over America prior to the rise of the dominant historical races, and their spread over India, Ultraindia and Asonesia in the era of Draviro-Australian civilization, now represented by the Australians, throws light on the ethnic condition of S. W. Asia at the period when a civilization of this character was connected with the most influential and diffusive formation. The roots only are Chinese. The Dravirian and Asonesian forms of the pronouns shew that the languages of this formation had already acquired a harmonic and postfixual character. The preservation of the same roots in American, N. E. Asiatic, Scythic and African languages and the generally Scythic structure of Dravirian, lead to the inference that they were associated in Upper Asia with an ideology of the Scythic kind before they spread to India and the farther east.

The general conclusion is that the Draviro-Australian pronominal system is not an offshoot from Scythic proper or from any of the other Aso-African systems, but is a remnant of the proto-Scythic era of the harmonic development, and a link between the Scythic and American ideologies and between Chinese and American. In American the crude and pleonastic ideology of the early monosyllabic stage is preserved under a harmonic and agglomerative phonology. In the Australian condition of Draviro-Australian the pronoun system retains the same combination to a large extent. Traces of a similar crude and elaborate system are found in the other Aso-African formations, and they all present evidences in flexions, contractions and irregularities of different kinds, of having fallen away from a condition more elaborate and consistent in terms and forms. Although Scythic is amongst the most decayed and simple of these systems, some of its members which retain other American traits also, are possessed of vestiges of such a condition, while its affinities to Indo-European and other systems which preserve similar and more numerous vestiges,

and the highly agglomerative character of the formation, leave no doubt that in one of its early stages the proto-Seythie pronominal combinations were as crude and numerous as the American or Australian. The Dravido-Australian system may be considered as proto-Seythie in its general structure and character, for even in Upper Asia that type is not limited to languages which possess the proper Seythie pronouns.

B. *Definitives, (including 3rd Pronouns, Possessives and Directives.)*

The possessives and directives are merely definitives, and as most formations possess nearly the whole range of archaic definitives, the comparison of isolated applications of them can seldom lead to specific ethnic results.*

The Dravirian and Australian labial definitive *pa, wa* &c is Tibeto-Ultrindian, Seythie, N. E. Asian (Kamschatkan), Caucasian, African, Celtic (Welsh *ve, vo* &c); and it passes into *ba, va, ma, am, um* &c &c.† In Tibeto-Himalayan languages it has a qualitative power, which is not found in Dravirian.‡

Ta, da (with vocalic variations) is almost universal as a definitive, and it passes through the surd form into *ha, ga* on the one side and through the sonant into *la, ra, na* on the other.§

In the form *ni, in*, &c it is the principal Dravirian possessive, and this is probably identical with the Tibeto-Ultrindian and Seythie poss. *ni*. The nasal possessive *in, yin, n, i* &c is also Semitico-Libyan and Indo-European. The Turkish reduplicated forms *nin, nun, nen, ning* are found in Asonesia as well as the simple form *ni*. The same particle occurs in some of the Irano-European languages as an archaic possessive, as in the 2nd personal pronoun in Zend *ma-na* (in Sanskrit euphonically *ma-ma*), Gothic *mei-na*, &c. In Guzerati both the simple and reduplicated

* See the remarks on this subject in various preceding passages, and in particular those on the Seythie definitives &c (*ante* viii, 60 to 64). The reader may also refer to the same place for examples of the wide prevalence of most of the definitives found in Dravirian, and for indications of Seythie affinities.

† See vol. viii, p. 63.

‡ But Gond exceptionally has *wa*, 1st pron. *no-wa* sing., *mo-wa-n* pl., 2nd pron. *ni-wa* sing., *mi-wa-n* pl. This form is Tibetan through Gangetic. Magar 1st pron. *ngo-u*, (root vowel of *nga* modified by that of postl.); 2nd *nu-wa* (*ib*) 3rd, *hoch-u* (nom. *hos*.) In the plural the full form *um* is used, corresponding with the Gurung *mo*, the latter however being plural not simply poss.

§ *Ante* vol. viii, p. 62.

forms are found, *ni*, *no*, *nun*. The same possessive is found in several of the Gangetic languages including Limbu, (*in*) and Bodo (*ni*). * Of the other Himalayan possessives, the most common, found also in Male and Uraon, *ko*, *ke*, *gi*, &c is Tibetan and Chinese and the rarer *ti*, *chi*, *so*, *sei*, *sa* &c is Chinese (*ti*, *chi* &c), (see the Table).

The transitive use of *ka*, *hu*, *tu*, *du* is very general (Iranian, Irano-Gangetic, (Hindi &c), Siamese, Chinese, Scythic, African, Asonesian &c, including Australian). But nearly all the definitives are so used.

The Dravirian *na*, *an*, *nu* &c used as a definitive with pronouns &c, is applied in the same mode, and also as a def. prefix, in Semitico-African and Asonesian languages. As a def.—separate, prefixed or postfixed—it is found also in Iranian, Semitic, Scythic and American languages. The form in *r*, *l*, is also common, and in some African, Asiatic and American languages it assumes peculiar forms such as *tl* (S. African, Caucasian, N. E. Asian, American). The common masculine and inanimate or neuter 3rd pronoun is the dental definitive *da*, *du*, *thu* &c.

The absence of the widely prevalent sibilant or aspirate definitive might be considered as a peculiarity of the Dravirian formation, but it is frequently only a modification of the dental as in the Scythic and Semitic 3rd pronoun in *ta*, *sa* &c.

The Toda *athu*, Male *ath*, shews the dental becoming aspirated or half sibilant. In the Uraon *as-an* (*an* is a postf.) the change is complete. The Magar *hos* is the same particle, and in the Sunwar *hari* it appears to be combined with a different one. The Burman *thu*, *su* and the Murni *the*, Gurung and Manyak *thi*, Naga *ate* are variations of the same particle, probably of Chinese derivation. The root is so widely spread that it is hardly safe to draw any conclusions as to the relations which its various forms may indicate. The resemblance between the Dravirian and Chinese pronominal roots is completed by the Chinese 3rd pr. *tha*, *thi* which however has representatives in most of the formations of the old world.

The Dravirian *ra*, *we*, *wu*, of the 3rd pronoun (Australian *ba*, *pa*), is the same as the common *pa*, *bu*, *wa*, *u* &c. of the Tibeto-Ultra-indian languages, and in both formations is directly connected

* *Ante*, vol. viii, p, 61. See the Table.

with the N. E. Asian and Scythic labial definitive and assertive. It is also Caucasian, Semitico-African &c. In Dravirian it has a generic personal application, the postfix *a* rendering it masc. and the postfix *i* fem.,* but it also occurs as a common def. element. The labial as a postfix is usually neuter and sometimes fem. and in Tulava it is the 3rd pron. neuter. The primitive form was probably the feminine flexion of the labial which also came to include neuter. [See Tibetan, Anam &c.]

The objective use of the neuter *m* is common to Dravirian with Indo-European. It is also objective in Caucasian and Scythic.

Besides the dental and labial 3rd pronoun, Dravirian has a vocalic one *i*, *ye*, *yi*, found also in Kol. The more common Kol 3rd pronoun *ni* is also demonstrative and it is found with both functions and as a generic definitive element in many other formations, Scythic, Africo-Semitic, Malagasy, Asonesian. As a demonstrative it is Scythic, Tibeto-Ultra-Indian.

The vowels are used as definitives in Dravirian, chiefly prefixed to other particles. All the 3rd pronouns above referred to take them (*a*-*va*, *a*-*van*, *a*-*du*, *a*-*ye*, *a*-*i*, *i*-*ni* &c. &c). In some Dravirian demonstratives and locatives *i* has a proximate and *a* a remote force. Similar applications of the vowels are found in Scythic, Indo-European, Semitico-African, Malagasy, Asonesian &c.

The affinities of the Dravirian possessive and directive system are too numerous and complicated to be referred to the influence of any other existing formation. They support its claim to an independent place amongst the most archaic of the harmonic formations. The general character both in roots and structure is Scythic but with a leaning in some points to Semitico-Libyan and Caucasian—which again are Scythic in many fundamental traits. The Tibeto-Ultra-Indian affinities in roots are in general coincident with the Scythic or with Chinese.

The indeterminate and variable functions of several of the definitives have been adverted to in connection with the pronouns. A similar confusion takes place in all agglutinative languages in proportion to the number of well separated dialects that exist or to the force of those causes that evolve dialectic changes in each

* Traces of a similar archaic application of these postfixes are found in Caucasian.

language with the progress of time. In the Semitico-Libyan and Indo-European formations we meet with facts of a like kind. The same element may become singular, dual, plural, masculine, feminine, neuter, possessive, objective &c. in different dialects and even in different positions.

Definitive Postfixes.

The use of definitive postfixes belongs to the earliest stage of the inversive formation and cannot be said to be even confined to it, for some prepositional languages postplace the definitive or demonstrative, as Siamese and most of the Indonesian languages. In the Africo-Semitic prepositional languages definitives are common as postfixes, and they occur in very archaic words, as in pronouns. Substantive terms are, to a great extent, composed of a root and a definitive postfix in the Scythic and North Asian, in many American and African, in the Caucasian and Indo-European languages and even in Semitico-Libyan.

The Dravido-Australian, unlike the Scythic and Caucasian formations, distinguishes the gender by some of its postfixes, in this respect possessing an Irano-Semitic character. The Dravirian inanimate or neuter postfix *am*, *um*, *mu* &c is identical with the Indo-European *m*, *am* &c of the objective which in *neuter* words is used as the nominative. This usage is Dravirian also. In Semitico-Libyan the labial has a masc. and plural force, and in some languages it is common or neuter. The feminine *i*, *a*, of Dravirian are likewise Semitico-Libyan and Indo-European feminine terminals. The masc. (sometimes neuter) power of *-n*, *d* and the fem. power of *-l* are not Indo-European or Semitico-Libyan, but the roots are preserved with the same powers in Caucasian words for "father" and "mother." All the Dravirian postfixes are found in Scythic, Caucasian and Semitico-African vocabularies.

It is deserving of remark that the wide spread definitive in *s* which is a common Semitico-Libyan, Indo-European and Scythic postfix to substantives does not occur as a Dravirian postfix unless *t*, *d*, *zh*, *j* may be taken to represent it. In the Scythic languages *s* frequently becomes *t* and both take the sonant forms *z*, *d* which countenances this suggestion.

The vocalic prefixes common in Scythic and African languages, and in some of the Indo-European (e. g. Greek) are rare but not

entirely absent in Dravirian as has already been remarked. Their archaic use is evinced by the various forms of the 3rd pronoun and demonstratives. But it must be observed that in the vocabulary the prefixal vowel is frequently a contraction of the root or of its first syllable, and that the general structure of the words is Scythic more than Caucasian or Semitico-Libyan, the vocables of those formations being comparatively curt and elliptic and more often involving a prefix or infix.*

In the Dravirian vocabularies the definitives are common but they appear to have lost their sexual functions in most cases. As they have also plural functions they may indicate number rather than gender in many words, most words being primarily collective or plural and not singular. *Al*, *l*, *lu*, *ru*, the feminine definitive, is common. The masculine *-an*, *-na*, *-n* occurs less frequently, but as the lax and flexile phonology renders the *n* easily transmutable into *d*, or *l* on the one side and into *m* on the other, and as in some dialects *d* is the current masc. form, postfixes that now appear to be phonetically fem. or neuter may originally have been masculine. The neuter (sometime feminine) labial occurs under varied form *-va*, *-av*, *-v*, *-vu*, *-pu*, *-p*, *-ba*, *-b*, *-ma*, *-mu*, *-am*, *-m* &c. &c. The neuter definitive *-du*, *-da*, *-di*, *-thi* is much less common. The guttural *-ha*, *-ga*, *-gu* &c. is comparatively rare save in Gond. As in the dialectic groups of other formations different glossaries affect different postfixes or forms of postfixes, showing that a separation into dialects preceded the concretionary stage. At the same time many roots have the same postfix in all or several of the dialects, in some cases by the direct transmission from the pre-dialectic period and in others from the dissemination of the form of one dialect amongst others.

* Bopp has remarked that Sanskrit, Pali and Prakrit in combining the final vowels of the primary forms with case-suffixes beginning with a vowel interpose *n* euphonically, a phenomenon which is almost limited to this group of the Iranian languages, in which, also, it is most frequently employed by the neuter gender, less so by the masculine and most rarely by the feminine (Comp. Gram. I, § 133). In the highly euphonic Dravirian languages consonants are interposed, *an* becoming *nam*, *ram*, *dam*, *tam* &c, and it is possible that the Sanskritic languages derived this peculiarity from the influence of the languages of the Dravirian formation with which it came in contact in the basins of the Indus and Ganges. I do not here consider the question whether the agreement in these particles between Dravirian and Iranian was a consequence of the advance of the latter into the province of the former or of an earlier cause. The definitive is a common one. It occurs as a prefix in the Africo-Asiatic languages and as a postfix in the Caucasian and Ugrian, and it is evidently the common labial definitive.

Am, the inanimate or neuter definitive, is common in the Southern vocabulary, Tamil-Malayalam; *lu, nu, du, tu* &c., variations of *lu*, in Telugu, Karnataka and Tuluva. Where Tamil has *pu, bu*, Malayalam has often *ba*, Telugu *va* and Karnat. *vu*. *Vi* is comparatively rare. It sometimes becomes *bi, mi, b*. The final vowels vary greatly. Tamil affects *ei*, Malayalam *a*, Telugu and Karnataka *u* and *i*, Tuluva *e*, while Tuluva generally dispenses with the vowel. In the purer Dravirian languages of the Vindyan group, Gond, Uraon and Male, similar postfixes occur. They are distinguished by the frequent use of *h, ha, kka*. Double definitives sometimes occur, and they are probably to be explained in the same way as the double prefixes of Kasia and other languages. But in a few cases one of the definitives appears to have been infixed. Thus *tolu* "skin" is also *tovalu*, and *potu* "sun" is also *potutu*.

The definitives which are used as plurals have been already considered. The Chinese and Tibeto-Ultraindian affinities of the labial are shown in the Table.* The more remote were adverted to in discussing the pronouns.

The common plurals in *kal, gal, kulu, ŋgal, nar, kan, la, al, r, ir, lu, ru, &c.* and *k* are Seythic, East Tibetan, Ultraindian and Gangetic.*

The Seythic, East Tibetan, Ultraindian and Gangetic plurals in *ni, in, i* (flexional in several languages) although radically identical with the Dravirian *ir, la, &c.* distinguishes the systems in which it occurs both from West Tibetan (Bhotian) and Dravirian.*

The postfixed definitives belong to the foundation of the formation, and their forms and variations carry it back to an era in which Dravirian like Seythic and the other harmonic Aso-African formations had only partially conereted these particles with the substantial roots. In many instances where the roots are common to Dravirian with some of these formations, the definitives vary. (See the remarks on the Caucasian definitives, *ante*, vol. viii. p. 34.) In the comparative paucity of prefixed definitives Dravirian is Seythic more than N. E. Asian, Caucasian, Semitico-Libyan, Tibeto-Ultraindian or Asonesian.

* See Table of Plural Particles.

The most marked feature of the Dravirian system of pronouns and particles is its combination of Chinese and Tibetan roots with a Scythic phonology and structure and with some Scythic roots that are not Chinese. In its cruder and less agglutinative archaic form, of which Australian is partially a representative, its true place appears to be between Chinese and Scythic. The radical affinities of the system with Tibeto-Ultrindian are close and unequivocal. In roots the two are the same, and both are Scythico-Chinese, and much more Chinese than Scythic. The Dravirian and Australian forms do not appear to have been directly derived from Tibeto-Ultrindian. They have several marks of independent derivation from an E. Asiatic source, Chinese and Scythic. The historical connection with Chinese must be of extreme antiquity and altogether pre-Indian, for the general character of Draviro-Australian is inconsistent with the supposition that the Chinese formation itself was the first to spread into India and become the basis of the Dravirian. This would involve the assumption that *before* the barbarous Draviro-Australians spread to Asonesia an original Chinese formation had been modified by an intrusive Scythic one in India. The connection is mainly with the Kwan-hwa or proper N. E. Chinese and not with the western. The supposition that Dravirian preceded Tibetan in Tibet and is simply the product of the oldest Scythico-Chinese current from Tibet into India, Ultrindia and Asonesia, would make the close connection with Tibeto-Ultrindian a direct historical one, for the latter would thus be in great measure a form of the archaic pre-Indian Dravirian in which, after the separation of Dravirian, the Chinese element had increased from contact with Kwan-hwa and the Scythic proportionally diminished. But the Tibeto-Ultrindian languages themselves oppose strong facts in phonology, glossary and ideology to such a hypothesis, and Dravirian has direct western affinities—Caucaso-African, Iranian and Ugrian—which would of themselves render it more probable that the formation was transmitted to India round the Tibetan region to the westward, and not across it. The affinities between the Draviro-Australian and the Tibeto-Ultrindian systems are the necessary result of their both being Scythico-Chinese, but Scythic and Chinese are each of vast

antiquity and appear to have all along been in contact, so that mixed formations must always have existed and been in the course of production. The individuality both of Dravido-Australian and of Tibeto-Ultraindian not only when compared with each other, but with Chinese and the existing forms of Scythic, is so strongly marked, as to claim for each an independent existence from the most remote periods of Scythic and even of proto-Scythic history.

At the same time the Tibetan languages have been from era to era receiving new impressions both from Chinese and from more than one branch of Scythic; and the eastern and northern dialects have been more exposed to these influences than the western and southern. The Tibetan languages, thus perennially modified, have, in turn, been carried into the Dravirian province from era to era, supplanting and modifying the Dravirian languages, so that—leaving the Arian and the direct Chino-Ultraindian elements out of view—India and Ultraindia now present 1st Dravirian languages, little if at all Tibetanised, but in which some Tibeto-Ultraindian elements probably exist although difficult to discriminate (South Dravirian), 2nd Dravirian modified by Tibetan (Kol and, much more slightly, Male, Uraon, Gond), 3rd Tibetan in different forms (Bhotian or western, Si-fan or eastern) and of different eras and varieties in each form, with much blending amongst themselves, as well as with Mon-Anam and Chinese, and with a variable but comparatively weak Dravirian element, difficult to discriminate in most cases from that archaic community of roots to which we have adverted and from Tibetan having a Scythic harmonic tendency. In the Gangetic languages for example, an agglutinative and harmonic character may be either Scythic through East Tibetan or Scythic through Dravirian. The facts and general probabilities of every case must give the decision, where decision is possible.

The three existing branches of the Dravido-Asonesian family—the Dravirian proper, the Kol and the Australian—have each had an independent development, and been exposed to widely different influences, internal and external, from a very remote period. The Australian pronominal system is the most crude, redundant and agglomerative, and the least flexional. The systems, both of

Kol and Dravirian proper are more agglutinative, elliptic, and flexional, and their forms and particles are more confused and in dialects have wandered more from each other and from the original system. While Kol retains some forms that have disappeared in Dravirian proper, the pronouns have lost the primary agentive or separate forms which both the other branches preserve. In most respects the system is that of an impoverished dialect of Dravirian proper formed at an early stage of the latter, and since modified by separation, and by the influence of Ultraindian formations. The breaking up of the original system is so considerable that it was probably produced by the contact of the northern Dravirians with a race having a different pronominal ideology. It is a dialect that could not have arisen so long as the native Dravirian idiom remained strong and pure, and is of the kind that grows up when a race becomes closely connected and intermingled with a foreign one. The range of the Kol terms to the eastward renders it probable that this modified system was not formed until the earlier Ultraindian tribes occupied the lower basin of the Ganges, blended with the Dravirian aborigines and produced a mixed lower Gangetic race and language. The Kol system must have arisen in one community which ultimately became predominant in Bengal, spread over a portion of the proper Dravirian highlands on the right bank of the Ganges and carried its pronouns with its numerals over Ultraindia.

Each of the purer North Dravirian languages—Male, Uraon and Gond—has also had its pronominal, its definitive or its numeral system slightly disturbed by the North Gangetic branch of the Tibeto-Ultraindian family or by the previously modified Lower Gangetic or Kol system. Thus some of the Kol numerals are found in Gond dialects. Gond has received a Tibeto-Gangetic possessive particle into its pronominal system, and like Kol it uses the plural labial in the singular of its 2nd pronoun, while the general irregularities of its pronominal system speak to the shock it has received from the presence of foreign systems or of a foreign element in the languages of adjacent and partially intermixed tribes. Uraon and Male have adopted a Tibeto-Gangetic possessive.

The annexed Tables show the glossarial affinities of the Dra-

virian pronominal roots, and of the possessive and plural particles. The other directives are so much interchanged and confused with possessives in Dravirian as in other formations that I do not give tables of them.

TABLE SHOWING THE GENERAL RANGE IN THE OLD WORLD
OF THE PRONOUNS FOUND IN DRAVIRIAN.

1ST PRONOUN ("I")

I. CHINESE.

n̄gó	Kwan-hwa, Quang-tung
'n̄gu	Shang-hai (<i>pl. n̄gu ni, or ni, I + you</i>)
ngei	Kek (Cheo-hu)
ngai	"
ngoi	"
gua	Hok-kien, Hai-lam
wo, wu	Kwan-hwa
ù	Tie-chu
ua	"
wa	"
nung	(occasional)
yu	Kwan-hwa

II. DRAVIRO-AUSTRALIAN.

A. *Australian and other Asonesian.*

nga-nya	W. Australian
nga-toa	N. S. Wales
nga-ii	S. Australian
nga-pe	Encounter Bay
nga-tu	Kowrarega
na-ng	Tobi
na-k	Pelew
ngo	Rotuma
ngou	"

B. *Dravirian proper.*

na-na	Gond, Karnataka (<i>poss.</i>) Brahui (<i>poss.</i>)
na-n	Tamil, Kurgi, Brahui (<i>pl.</i>)
nya-n	Malayalam
nya-n	"
nga-n	"

na-nu	Karnataka
a-n	Kar. Anc., Gond (<i>ag. postf.</i>)
a	Gond (<i>ag. postf.</i>)
ya-nu	Tuluva
ya-n	Tamil
na-k	Gond
na	Telugu (<i>poss. obl.</i>)
ne-nu	Telugu
e-nu	Tam. (<i>in obj. obl.</i>), Mal. (<i>in obl.</i>), Karn. (<i>poss. obj.</i>), Kurgi (<i>ib.</i>), Toda (<i>ib.</i>)
e-nu	Kam. (<i>ag. postf.</i>)
e-ne	Karn. (<i>ag. postf. in present</i>)
en-na	Kurgi (<i>poss. obj.</i>)
en-an	Uraon
en-re	Mal. (<i>poss. -re or -de.</i>)
e-n	Tuluva, Male, Tamil (<i>poss., ag. postf.</i>) Toda (<i>ag. postf.</i>), Uraon (<i>pl.</i>)
e-ng	Kurgi (<i>pl.</i>)
in-ihe	Malayalam (<i>dat.</i>)
e	Karn. (<i>ag. postf. in verb abs. past tense</i>), Tu- luva (<i>ib.</i>)
i	Brahui
o-ne	Tod.
wo-n	"
o-ng	Male (<i>poss. with -ki</i>)
o-m	Male (<i>pl.</i>), Tamil (<i>pl. ag. postf.</i>)
no-na	Gond (<i>poss.; in pl. mo-nan</i>)
o	Tuluva (<i>pl. ag. postf. in verb. abs., past tense</i>)

C. Kol.

ing	Bhumij, Mundala, Ho
inge	Sontal
eing	Ho
aing	Ho

D. Gangetic and Ultraiadian.

inga	Limbu, Milchanang
ninga	Milchanang
i	Namsangya Naga (<i>poss.</i>)
eng	Kambojan, Chong.

eing	Sĩmang
cin	"
en	"
ain	Bĩnua
oin	"
yun	"
oei	Mon
oe	"
ye	Sĩmang
cyu	Bĩnua

E. Asonesian.

aing	Sunda
ani	Timor
<i>nyu-ũga</i>	Sumba
<i>anare</i>	Belo
<i>ba-nian</i>	Kissa
<i>ina</i>	Formosa

III. TIBETO-ULTRAINDIAN.

<i>ũga</i>	Tibetan, Horpa, Gyarung, Naga (Namsang.), Kasia, Burman, Murmi, Gurung, Magar, Serpa.
<i>ũga-yo</i>	Gyarung (double form, yo is Chinese.)
<i>na</i>	Tibetan
<i>ũgya</i>	"
<i>ũgai</i>	Burman (<i>poss.</i>), Singpho, Tengsa, Naga (<i>poss.</i> or <i>pl.</i> forms, Tengsa has a in pl., the Sing- pho pl. has i; a mixed system; the 2nd pron. in Singpho has both nang and ni in sing., ni in pl.)
<i>nyi</i>	Naugaung Naga (pl. annok, mixed system)
<i>ni</i>	Khari Naga, (pl. akan, mixed system)
<i>aũg</i>	Bodo, Garo, Naga (postf.), Kiranti (<i>poss.</i> ang <i>ho</i>)
<i>an</i>	Deoria Chulia
<i>aũg-a</i>	Garo
<i>anka</i>	Kiranti (a modification of <i>aũga</i> or two roots combined, see <i>ka infra</i>)
<i>a</i>	Manyak, Naga (Angami), Mikir (pl.)

<i>ũge</i>	Takpa, Singpho (<i>obl.</i>)
<i>nye</i>	"
<i>ne</i>	Mikir, Tunglhar (<i>pl.</i>)
<i>net</i>	Ladak and Kinawari Tibetan (<i>pl.</i>)
<i>eneshe</i>	Tibarkhad (<i>pl.</i>)
<i>eneatung</i>	" "
<i>i</i>	" (<i>ag. postf.</i>)
<i>ni</i>	Serpa (<i>in pl.</i>)
<i>ani</i>	Limbu (<i>in pl.</i>)
<i>ainko</i>	Kiranti (<i>poss. pl.</i>)
<i>in-na</i>	Murmi (<i>poss. pl.</i>)
<i>ũgi</i>	Gurũng (<i>in pl.</i>), Kasia (<i>pl.</i>)
<i>ning</i>	Garó (<i>pl.</i>)
<i>ni-ma</i>	Namsangya Naga (<i>pl.</i>)
<i>ni-hhala</i>	Tablung Naga (<i>pl.</i>)
<i>yo</i>	Gyarung (<i>pl.</i> a Chinese pron.)
<i>i</i>	Singpho (<i>pl.</i>)
<i>ngo</i>	Abor-Miri
<i>ong</i>	Lau (<i>poss. in Laos</i>)
<i>ka</i>	Thochu, Dhimal (a var. of <i>ũga</i>), Lepcha (<i>in poss. sing. kaseusa and in pl. kan-kurih. Comp. Kiranti an-kan (pl.)</i>)
<i>go</i>	Lepcha, Sunwar
<i>gu</i>	Milechanang, Sumchu
<i>gi</i>	Tiberkad
<i>geo</i>	"
<i>kĩ</i>	Milechanang (<i>in pl. kĩ-shung</i>)
<i>kyi</i>	Khyeng, Silong (<i>ki in pl. with postf.</i>)
<i>kima</i>	Kyau
<i>kem</i>	Joboko Naga (<i>pl.</i>)
<i>kai</i>	Kumi, Kami (<i>comp. ngai Singpho &c</i>)
<i>tni-te</i>	Muthun Naga (<i>pl. i. e. t for k</i>)
<i>kha</i>	Lau, (Siam)
<i>kau</i>	Lau (Khamti, Ahom)
<i>akau</i>	Kari Naga (<i>pl.</i>)
<i>tau</i>	Tablung Naga, Anam (<i>t for k</i>)
<i>ti-sei</i>	Malung (<i>poss.</i>) to-we (<i>obj.</i>)
<i>ti-checha</i>	Tablung (<i>pl.</i>)

ku	Lau (Laos), Muthun and Joboka Naga
kung	Lau (Shan)
khwa	Toung-lhoo
he-lam	Mulung (<i>sing.</i>) he-lan (<i>pl.</i>)

IV. CAUCASIAN.

na	Kasi Kurauk
-n	Iron (postfix)
-in	"
-on	"

V. EUSKARIAN.

n	(objective)
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VI. SEMITICO-LIBYAN.

[See *ante* Sec. G. Supplement to Sub-Sec. 4; the root is na, no, nu, ne, ni, an, in, &c, with a prefix or postfix or with both, but also occurring bare,—contracted to the postfix or to a vowel or consonant of the root or postfix, the latter also changing from *k* to *g*, *h*, *t*, *s*.]

VII. UGRIAN.

The 1st pronoun is the common Scythic labial, but in some cases the *m* changes to *n*.

na	Samoiede (Motor)
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VIII. N. E. ASIAN.

na	Korea
nai	"
nd	Yeniseian
dy	"
ya	"
ai	"
a	"

IX. AMERICAN.

ne	Athapascan
nan	"
nccah	Sioux (Winnebagoes)
ney	" "
ni	Shoshoni
i	"
in	Sahaptin

nai Chinook
 &c. &c. &c.

2ND PRONOUN ("THOU").

I. CHINESE.

ni Kwan-hwa, Gyami, Horpa, Quang-tung,
 Shanghai, in *pl.* of 1st pron. *n̄gu ni-qr ni* (i.
 e. I, thou)
 li Kwan-hwa
 lin "
 urh, 'rh "
 nai, nei " (anc.)
 nong Shanghai
 na "
 nyi, ni Kek (Cheo-lu)
 ndi Kwang-tung of Si-ning
 li Hok-kien, Tie-chiu
 lú "
 du Hai-lam
 ju Kwan-hwa
 jo
 nyu

II. DRAVIRO-AUSTRALIAN.

A. *Australian and other Asonesian.*

ngi-ngi Sydney
 ngin-toa N. S. Wales
 nin-na S. Australian
 ngin-te Encounter Bay
 ngi-du Kowrarega
 ni-wu S. Aust. (*dual.*)
 ni-medu W. Aust. (*pl.*)
 nu-rang W. Aust. (*dual.*)
 nu-ra N. S. Wales (*ib.*)
 nu-wala Parankalla (*ib.*)
 nu-rali " (*pl.*)
 n̄gu-rle Kowrarega (*dual.*)
 n̄gu-ne " (*pl.*)
 ono Onin
 un̄goe Tarawa
 ooine Hawaii

B. *Dravirian proper.*

ni	Tamil, Malayalam, Toda, Telugu (<i>poss.</i>)
ni-mu	Karnataka
ni-n	<i>Ib.</i> Anc., Kurgi, Male, Tamil (<i>obl.</i>) Malayal. (<i>obl.</i>)
nin-na	Karn. (<i>poss.</i>), Male (<i>pl.</i>)
ni-en	Uraon
ni-vu	Telugu (<i>pl. postf. in sing.</i>)
ni-h	Gond
i-mu	Khond, Tuluva (<i>in pl.</i>)
i-ng	Male (<i>in poss.</i>)
i	Gond (<i>ag. postf.</i>), Karn. (<i>ib.</i>)
ai	Tamil (<i>ib.</i>)
i-r	Kar. (<i>pl.</i>), Gond (<i>ag. postf. pl.</i>)
i-ri	„ (<i>pl. ag. postf.</i>)
i-r-gal	Tamil (<i>ib.</i>)
na	Toda (<i>in pl.</i>), Brahui (<i>obl.</i>)
na-ni	Malayal. (<i>poss. with postf.</i>)
un	Tamil
nu	Tamil Anc. (<i>with pl. poss.</i>), Brahui (<i>with pl. postf.</i>)
-ru	Telugu (<i>ag. postf.</i> ; <i>pl. particle for sing.</i>)
re	Brahui (<i>ib.</i>)

Plurals with the labial postf. or flexion.

ni-m	Karn. Anc., <i>Ib.</i> Mo d. (<i>poss. with postf.</i>), Male (<i>pl. poss. with postf.</i>)
nim-ma	Karn. (<i>obl.</i>), Kurgi
nu-m	Brahui, Tamil Anc. (<i>poss. with postf.</i>)
u-m	Tamil Mod. (<i>poss.</i>)
mi-ru	Telugu
mi	„ (<i>poss.</i>)
me	Gond
im-at	„
im-ar	„
mi-wan	„ (<i>poss.</i>)

Labial Plural forms used in the Singular.

vu	Telugu (<i>ag. postf.</i>)
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um-*athu* Malabar (*obl.*)

im-*ma* Gond

C. *Kol.*

in-*ko-ghi* Mandala (*pl.*)

um Ho [*Tam. um pl.*]

umma Bhumij (*obl.*)

umge Sonthal

am Bhumij, Mandala

ami Sonthal (*obl.*)

appe com. *pl.* of Kol

api Mandala (*pl.* with postf.)

me Ho (*obj. postf.* in verbs) [*Gond*]

m „ (*ib.*)

be „ (*pl.*)

D. *Gangetic and Ultraindian.*

am Kiranti (*in poss.*)

pi Mon

puch „

bai „

pha Kasia

phi „ (*pl.*)

me Kasia, Tengsa Naga (*in poss.*)

ma Namsangya Naga (*poss. sing and pl.*)

mei Anam

wonu Kambojan

mung Lau (Siam)

mau „ (*Khamti*)

mo „ (*Ahom*), Sĭmang

bo Chong, Sĭmang

mong Malayu of Trauḡganu

E. *Asonesian*

mu } Malayu-Polynesian, *poss.* and *pl.*, entering
mo } also into composite plurals of the 1st pro-
mi } noun.

nyu-mu Sumba

moe Solor

iba	Bali
ibu	Kandayan
iwo	Mandhar

III. TIBETO-ULTRAINDIAN.

A. *East Tibetan or Si-fan.*

nan-re	Gyarung
nan	Changlo, Kami
nang	Bodo, Garo, Mikir, Singpho, Burman, Khyeng, Kumi, Naga (Namsang, Tengsa, Khari, Tablang, Mithan), Magar, Changlo (in poss.)
ngan	Tiberkad
nga	"
na	Gyarung (<i>poss. pref.*</i>), Dhimal, Mikir (in <i>pl.</i>), Singpho (in <i>poss.</i>), Naugaung Naga, Tengsa Naga (in <i>pl.</i>), Tounghlu
no	Manyak, Dophla, Abor, Deoria Chutia, Angami and Mozome Angami.
o	Namsangya Naga
nuwo	Magar (<i>poss.</i>)
huni	Tiberkad
ani	Deoria Chutia, in <i>poss. ni-yo</i> [<i>? Drav.</i>]
i	Takpa
ni	Dhimal (in <i>pl. ny-cl</i> , <i>poss. ni-ng</i>) Singpho (in <i>pl. ni-theng</i>), Khari Naga (in <i>pl. ni-hhala.</i>)
i	Takpa
ne	Namsang Naga (in <i>pl. ne-ma</i>), Angami Naga (in <i>pl. ne-ra-ma</i> ; also in <i>poss. sing.</i>)
neng	Burman
nen	"
meng	"
men	"

B. *West Tibetan or Bhotia.*

[The root is not Chinese in form, but I place the series here in order to illustrate the mixture of systems in the Himalayo-Ultra-indian provinces. The original was probably nga, nge, ngyo, a

* Ni is given in the Vocabulary (and copied by Muller) as the prefixal *poss.* form, but it appears to be a misprint as Hodgson in his notices of the grammar invariably uses na-, and in a note to the Vocabulary na- also occurs.

form of the broad or E. Tibetan variety of the Chinese root still found in Tiberkad. In Thochu a similar change from *n̄g* to *k* has taken place in the 1st pronoun.]

kwa	Thochu
kwe	"
ka	" (in <i>poss.</i>), Milchanang (also <i>kas</i>)
chha	Sokpa, Newar
khyod	Tibetan <i>wr.</i>
khe	" <i>sp.</i>
khyo	Serpa
khye	" (<i>poss. pl.</i>)
khe-ne	Limbu
ke-n	Gurung
kha-na	Kiranti
kha	Lhopa (in <i>pl.</i>)
hau	Lepcha
ha-yu	" (<i>pl.</i>)
chhu	Lhopa
chhe	" (<i>poss.</i>)
kheu	" (<i>poss. pl.</i> as in Serpa)
gai	Sunwar
ai	Murmi
ki	Milchanang
khau	Ahom (<i>pl.</i> Lepcha form)

[IV. CAUCASIAN.

di Iron, closer to the Scythic.

[V. EUSKARIAN.

n *fem.*, perhaps *def.* only.

[VI. SEMITICO-LIBYAN.

The 2nd pronoun is the dental, as in Scythic, changing in some cases to *k* and also to *th*, *sh*.]

VII. UGRIAN.

na-n	Wogulian
na-nk	"
nei	"
ny	"
ny-ngi	"

ny-n Ostiak

nu-m Ostiak

[The other Ugrian languages have the common Scythic dental and sibilant pronoun. *]

VIII. N. E. ASIAN.

nuu Korea

un "

IX. AMERICAN.

yin Athapascan

ni " Otomi (*poss.*)

ian "

na "

nanuk "

ne-be Cheroki

niah Sioux (also dia, de, neh)

inui Selish

nan Kinai

nin-ke Kitunaha

eno Naas

nune "

&c, &c. &c.

TABLE OF PLURAL PARTICLES OF E. AND S. E. ASIA.

Chinese, E. Tibetan, Ultraindian and Indian.

mun Chinese

mei "

pei "

me Gyami

mye Gyarung

kamye "

-mo Gurung

si-mong Garó (2nd pron.)

-ma Naga (Namsangya)

ma-rang Garó

ma-dang "

* Muller's table supplies:

nen, nenna, -n Ostiak (Irish)
 in Yakuti.

-m	Joboka Naga, Drav.
-mya	Burman
-we	Angami (1st pron.)
-te-be	Tengsa (2nd pron.)
-ping	Newar
[-nam	Tibetan]

N. E. Asian and E. Scythic.

a. l, n	Yukahiri
n, ŋg	Yeniscian
r (?)	Koriak
ra	Japan
ri	Manchu
r, l	Nyertshinsk
lar, ler, r	Turkish
nar, ner	Mongol
n	Ostiak
jergi	Manchu

Scythic.

i	Fin
i	<i>flex. in pron.</i> Yukahiri, Hungarian, Turkish
e	Samoiedo
e	<i>flex. in pron.</i> Manchu

Chinese and Scythic.

ki	Chinese
g, k, t, d	Scythic (with different vowels), also Caucasian, Euskarian &c.
tu, su	Chinese [Manchu sa, se, si, Mong. s, Turkish z, variations to ch occur. The Scythic sibilants are probably from t]

E. Tibetan.

b. ki, ko	Thochu
b. + a. k-lar	Thochu
a. + b. rigi	Horpa
a. ni	"
dur	Manyak [Mong. od, d, da, t &c. with r as in nar]

II. *Dravirian and Asonesian.*

a. la	Drav.
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	al	Drav.
	lu	"
	ru	"
	ir	"
	re	"
	de	"
	r	"
	nar	"
	mar	"
	n	Gond (in <i>pl.</i> of <i>pron. poss.</i> -wa-n)
b. + a.	kal	"
"	gal	"
"	ngal	"
"	kan	"
"	kulu	"
b.	g	"
	k, nk	"
	t	"
	ko	Kol
a.	ra	Australian (<i>plural</i> or <i>dual</i>)
	rang	"
	rali	"
	rie	"
	wa-la	"
	li	"
	dli	"
	le	"
	lin	"
	rin	"
	dlu	"
b. + a.	ngalu	"
	galang	"
b.	nga	"
	ra	Aru
	rara	"
	aronga	Polynesian
III.	<i>Gangetico-Ultraiudian.</i>	
a.	ra	Takpa

rang	Garó, Serpa
arang	Abor
rama	Angami
madang	Garó
era	Bengali
arai	Siam (3rd pron.)
b. + a. khala	Tengsa, Tablung
„ kara	Naugaung
„ galai	Dhimál
el, al, l	„
le	Muthun Naga (1st pron.)
li	Mikir
to-leli	Angami Naga
li, di, ni	Khyeng
ni	Murmi, Singpho
iu, n	Kiranti
ning	Namsangya (3rd pron.)
i	Kasia (general) Singpho (pron.)
i	<i>flex in 1st pron.</i> Serpa, Limbu, Kiranti, Murmi, Gurung, Garó, Singpho
e	Namsangya (<i>flex. 2nd pron.</i>)
he	„ (<i>demonstratives</i>)
ku-rik	Magar [rigi Horpa]
dig	Bengali
ki-ding	Abor (? ding from níng)
ki	Sunwar
theng	Singpho
chur	Bodo [dur Manyak]
dag	Tibetan
chag	„
cha	Lhopa
do	Burman
to	„
to-thete	Angami (3rd pron.)
to-leli	„ (2nd pron.)
jo, njo	Tibetan
yu	Lepcha
	<i>Chinese and Gangetico-Ultraiidian.</i>
tse	<i>Chinese</i>

tang	<i>Chinese</i>
eshe	Tiberkad
esh, ish, osh	Milchanang
tchi	Kumi [chi, si may be from ki]
chi	Garó (1st pron.) Kiranti (3rd pron.) Limbu (<i>ib</i>)
si-mong	Garó (2nd pron.)
sin	Abor
tam-she	Kanawari Bhotia [i. e. the Chinese double tang-tse. Comp. Tiberkad eshe]
ta-she	„
tham-che	Changlo
atung	Tiberkad
te-be	Tengsa (3rd pron.)
to-thethe	Angami (3rd pron.)
the	Toung-lhu
checha	Tablung Naga

AFFINITIES OF THE DRAVIRIAN POSSESSIVE AND QUALITIV
PARTICLES.

I. SCYTHIC.

Dravirian.

na, an, nu, ni, in, no
 ta, tu, thi, ti, ji, che, cha
 da, du, di, de
 ra, ru, ri, re
 la, lu &c.
 na, nu, no, nau &c.
 athi
 dana, tano
 tat, tad, dad
 a, i, e
 ia, ya, yo, ye, ei
 yo-ka
 da-ya
 u-da-ya
 u-dei-ya
 in-u-da-ya
 in-de

u-dei	
a-du	
ea	
ia, ai, a	Kol
a-tana	"
t-	Sonthal (<i>pref.</i>)

Scythic.

ni, un, ung, en, na, an
ning, nung,
n̄gge
n, n̄g,
i, e, u
inki
iana

East Tibetan (? Bhotia yi, i)

ni	Sokpa
i, e,	Manyak [i Mongol, Manshu]

Gangetico-Ultraindian.

i	Burman
ni	Bodo, Garo
in	Limbu
un	Kami
ng	Dhimal
ne	Mikir
na	Singphu, Murmi (also la) [Scythic na, an, a]
la	Murmi, Limbu, (<i>qual.</i>) Changlo (ib.)
ra	Limbu (<i>qual.</i>)
lu, lo	Changlo (<i>qual.</i>)
nang	Namsangya Naga
rang	"

II. CHINESE POSSESSIVES IN TIBETAN, GANGETICO-ULTRA-INDIAN AND N. DRAVIRIAN.

CHINESE A.

ku, keu	Shanghai
ge, o	Hok-kien
ko	Quang-tung

Tibetan.

uk	
k-chi	Thochu
khyi, khi, kyi, hi	Bhotia
ga, ka	„ (<i>qualitive.</i>)

Gangetico-Ultraindian.

gi	Lhopa
ga	Changlo, Abor
g	Abor, Daphla
ga, ka	<i>qual.</i> Newar
gu	Newar
ke, ku	<i>qual.</i> Limbu
ko, ku, ke	Takpa, Kiranti, Sunwar, Magar, Dhimal,
	Khyeng

khang	Siam
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North Ultraindian.

ki,	Male
ghi, hi	Uraon

CHINESE B.

ti, chi, te	Kwan-lwa
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East Tibetan.

ti	Gyami
k-chi	Thochu

Gangetico-Ultraindian.

ti	Serpa
chi	Tengsa Naga
sei	Tablung Naga
sa	Lepcha
so, o	Kiranti

Dravirian. [Possibly some of the dental forms may be Chinese and not merely variations of the Scythic *n*.]

ETHNOLOGY OF THE INDO-PACIFIC ISLANDS.

II. NUMERALS.

As numerals are based on definitives, the principal test of their antiquity in a particular language is their mutual dependence, and their relation to the definitives preserved in pronouns, substantival prefixes or postfixes, directives &c. If their elements are the same that occur in these particles, and if the terms for the higher numbers are connected by composition or flexion with those for the lower, it may be concluded that the numerals are native, that is, belong to the earliest era of the language, or of the formation of which it is a member or derivative. If the different terms have no connection with the other particles of the language, it may be inferred that they are extraneous or of foreign origin; and this inference will be greatly strengthened if there is also an absence of connection amongst the numerals themselves. But, in the latter case, the heterogeneous character may be either that which they had in the single foreign language of their immediate origin, or it may be a consequence of successive displacements of old terms by new ones derived from several influential foreign languages. Tried by this test the Dravirian numerals must be considered as very archaic, and as native in the linguistic formation to which the ancient Indian languages belong. It may be remarked amongst their archaic characters that they are not only qualitative as in other systems, but the roots are always clothed with a possessive or qualitative postfix, so that the series is literally "one-of," "two-of," "three-of" &c.*

* See Appendix A. Comparative Vocabulary of the Numerals of the Dravirian Formation. The following are examples of the terms.

Rejecting the possessive postfixes, the S. Dravirian roots appear to be 1, *on*, *vo*; 2, *ir*, *er*, *ira*, *era*, *re*, *ra* (euphonically *ren* &c.); 3, *mu*; 4, *nal*; 5, *ai*, (euphonically *ain*, *an*, &c.); 6, *a*; 7, *e*; 8 (2, 10); 9 (1, 10). If *-du*, *-zhu*, *-ju*, *-nda*, *-nju* &c., *-ru*, *-lu*, *-nu*, *-tu*, *-da*, *-zha*, *-ta*, *-la*, *-ar*, *-di*, *-ji*, *-ti*, *-de*, *-d* &c. are all merely flexional variations of the possessive postfix, as is evidently the case the root of 5 is *ai*, and not *ain*, *an* or *anj*. If this view of the basis of the Dravirian numerals be correct, it follows that it was originally formed from a few definitives, further distinctness having ultimately been attained in each term by slight variations or flexions both in the roots and in the common postfixual possessives, variations similar to what take place in all agglutinative and flexional languages. Thus in Tamil the postfix takes the forms *-ru*, 1, 3, 6; *-du*, 2, 9; *-lu*, 4; *-ju*, 5; *-zhu*, 7; *-tu*, 8; *-ta*, 9;—in Malayalam *-na*, 1; *-da*, 2, 9; *-ar*, 3; *-ra*, 6; *-la*, 4; *-ja*, 5; *-zha*, 7; *-ta*, 8, 10;—in Tuluva *-ji*, 1, 5, 6; *-d*, 2; *-lu*, 4; *-i*, 7; *-nu*, 5; *-tu*, 10;—in Karnat. *-du* 1, 2, 5; *-ru*, 3, 6; *-l*, 4; *-lu*, 7; *-tu*, 8, 9, 10;—in Telugu, *-ti*, 1; *-du*, 2, 3, 5, 7; *-lu*, 4; *-ru*, 6; *-di*, 8, 9, 10;—in Todava, *-da*, 1, 2; *-du*, 3; *-n*, 4; *-j*, 5; *-ra*, 6; *-ta*, *-t*, 8, 9, 10. From the easy convertibility of most of these forms, any original regularity in their flexion—if such ever existed—was not likely to be preserved. But some of the languages maintain a manifest connection between 1 and 6, and between 8, 9 and 10, the former being probably dependent on an archaic quinary scale, while the latter intimates that when the scale became decimal, the lower numbers in the vicinity of 10 were named with reference to it.

From the general character of the variations in the forms of the postfixes and the faintness of any traces of real flexion, it is probable that none of them had ever any function but the simple possessive. They are similar to the ordinary variations of the possessive, the consonant being *d*, *t*, *r*, *l*, *u*, *j*, *zh*, *nd*, *nt*, *nr*, and the vowel *a* generally, but sometimes *i* (Malayalam), or *i* (Tuluva). [See the remarks on the final vowels affected by different dialects].

Dravirian. possess.

1. *on-ru*
2. *era-du*
3. *mu-du*
4. *na-lu*
5. *ai-du*

Kol.

1. *m-ia*
2. *bar-ia*
3. *op-ia*
4. *pon-ia*
5. *mor-ia*

The only other particle found amongst the postfixes is the guttural *l*. It occurs in 4 in Anc. Tamil *nan-gu*, Telugu *nal-u-gu*, Kannaḍa *nal-ku*, Toda *non-h*, Uraon *na-hh*. It appears also to have been an archaic postfix of a labial term for "one" preserved in Kol but now lost in all the southern dialects save Toda and Telugu, although keeping its place in 10 and higher numbers as well as in 3. In the Telugu *vo-ka-ti*, the original poss. *ha* of the term *vo-ka* appears to have become conereted and the secondary possessive *-ti* (the form in the Gond *un-di*) to have then been appended, as in the Brahui *mu-si-t*, 4; and Kol *m-ia-d*, 1. In Telugu the *-ka* of *vo-ka-ti* is lost, the dental only being preserved in the sonant form (*pa-di* 10, in *iru-va-i* 20, *mu-pa-i* 30 &c the *d* is dropped). The other dialects, with one exception, have also lost the guttural. The exception is Ancient Tamil which has *on-ba-ku-du* 9, i. e. "one (from) ten," *oru-pa-ku-du* 10 "one-ten," *iru-pa-ku-du* 20 (2, 10) &c. In some vocabularies of Toda it occurs in 5 *yaji-khu*, *khu*. It appears to be the definitive found in the dative (*-ku*, *-aku*, *-nha*, *-hi*, *-ge* &c.) and in the compound possessive and dative *-yo-ha*, *-yo-k*. The additional postfixes in Uraon, Gond, Malo (1) and Brahui appear to be attributable to these languages having left the home circle of the Dravirian family. Gond has even a prefix in 5 and 6 (*sai-jhan* 5, *sa-rong* 6).

The mutual connection of the roots themselves is somewhat obscure. 1, 2 and 3 appear to be distinct roots. 1, *on*, (no, o, in the Toda 11, *au* in most of the dialects in 100, but *on* in Toda) is definitive in Dravirian as in many other languages, in several of which it is also used as the unit, "the," "this," "he," "it" &c. for "one," "a". In South Dravirian it occurs as a demonstrative, generally in the curt form *a* (followed by definitive postfixes marking the gender). Tuluva has *ayi*, Khond *yan*, and the Kol dialects *ini*, *uni* "he" &c., *nea*, *noa*, *nia*, *ni*, "this," *eno*, *ana*, *hong*, "that." Tuluva has also *in-chi* "here," *an-chi* "there."

6. a-ru	8. tur-ia
7. e-du	7. e-ia
8. en-tu	8. irl-ia
9. on-ba-du	9. ar-ca
10. pa-tu	10. gel-ca

It is found in some Ultraindian and many Asonesian languages as a definitive, demonstrative and unit. The South Dravirian *on*, *I*, appears to be one of the two principal definitives, demonstratives, and 3rd pronouns of the formation.

The second, and in South Dravirian—as in Sifan, Gangetico-Ultraindian and Australian—more prevalent, 3rd pronoun &c., the labial, is also used in S. Dravirian as the unit. It is a common definitive postfix, as well as 3rd pronoun. In the exceptional *vo-dla* Toda, *vo-ha-ti* Telugu, *I*, *vo* is evidently the root and *da*, *ha* and *ti* possessive postfixes. The antiquity of the term is proved by its having kept its place in 10 and the higher numbers. The Telugu guttural, as we have seen, is preserved in the Ancient Tamil 10, *ba-hu-du* (in 9 and 50), *pa-hu-du* (in 10, 20 &c.). In 10, 20 &c. the labial root takes the forms *ba*, *pa*, *va*, in Mal.; *ba*, *pa*, *va*, and *mi* in Telugu; *bha*, *ha*, and *va*, in Karnataka; and *bo*, *po*, *vo*, *pe* in Toda. In the Malayalam, Telugu and Karnataka 9, *on*, *1*, becomes *om*, which assimilates it to *vo*, but the assimilation appears to be phonetic merely. In the term for 100 Telugu preserves the labial, *va-nda*. With reference to the variation of the vowel from *a* to *o*, it may be remarked that in the 3rd pronoun the southern languages have *va*, *av*, *am*, &c. while Gond has *wu-r*, and that *o*, *u*, are found in Newar *wo*, and Abor *bu*. On the other hand Gyarung, Dhimal, Garo and Tung-lhu have *wa* and Dophla *ma*, while Takpa has *pe* and Bodo *bi*. In S. Dravirian the postfixed labial definitive has various forms, *bu*, *bo*, *ba*, *va*, *vo*, *vu*, *pa*, *po*, *pu*, *ma*, *mo*, *mu*, *um*, *am*, &c., the vowel having little stability.

The other 3rd pronoun of the Dravirian formation,—as *an* Uraon, *ath* Male, (*asa-bar* in pl., *ahi-hi* in poss., *ih* “this,” *ah* “that”), *it*, *id*, *adi*, *athu* &c. S. Dravirian,—does not occur as the unit in any of the Dravirian or Kol numerals, but the Brahui *as-it* has it. That *as* is the root and that it is Dravirian appears not only from the postfix, but from 2 and 3 also being Dravirian (*ira-t*, *mu-s-it*). The absence of the sibilant as a Draviro-Australian unit is one of the most striking peculiarities of the system.

Ra, *e-ra*, *yer*, *i-ru*, *ir*, *re*, *en* &c. 2, is one of the variations of the common def. *da*, *la*, *na*, &c. of which *n*, *na*, has pronominally been restricted to the masculine gender, and *la*, *l*, to the feminine. *Ra*

(variable to *la*, *le*, &c.) is the plural form, and it may be derived from 2, or *eice versa*. In 8 (2, 10), the root for 2 has the forms *e*, *ye*, in Tam., Mal., Tod., *en*, *yen* in the other dialects, as in the Uraon 2 (*en-otan*). In 12 it is *er*, *ira*, *ra* and *e* or *ne*. In 20 it is *iru*, *ir*, *iri* (in Toda *ye*, *e*, *i*, and in Karnataka *i*).

The root for 3, *mu*, corresponds with the labial definitive, with the pronominal plural element, and with the labial root for 1, thus giving indication of a primary binary scale in which the term for 3 returned to the root for 1, (2, 1). In higher numbers (13, 30 &c.) it generally retains the form *mu*. In Dr Stevenson's Karnataka list 13 is *had-im-b-ru*, in which *b* represents *mu* and labialises the *n* of the conjunctive *-in*.

The root for 4, *nal*, *nar*, *non*, (if we include the final of the first syllable of the term), appears to be a repetition and reduplication of *ra* 2 (i. e. 2 dual, as in many other languages). In 14 it is *nal*, *n* or *an* (*pa-n-ka*, *pat-in-an-ku*). In 40 it is *nar*, *nal*. It is probable that the *k* postfix was adopted instead of that in *n*, *l*, *d*, &c. to distinguish it from the root. This is supported by the fact that in the higher numbers the other numerals lose the possessive postfix, while 4 loses *hu* *k* only and retains *l*, *r*. The closest foreign terms for 4 have a final *l*, *n*, &c. (*nila*, *nol*, *nan* &c.)

The higher roots present little that is tangible. But there is evidently a connection between these very elliptic and undefined higher roots and the two first of the lower series, 1, 2, 3. 5 is *ain*, *yan*, *an*, or *ai*, *ya*, *ayi*, *ei*. As the higher as well as the lower numbers are formed from three elements, *on* &c., *mu* &c., and *ir*, *er*, &c., it is not probable that *ai*, &c., involves any fresh root. As *i*, *e*, is only found in the root for 2, and represents it in some other terms, it may do so here also. In the Toda *er-bod*, 50, 5 is represented by *er* 2. The term in Toda at least, was therefore 3, 2, (as in Kol), and as the *a* of *ai* can hardly be a remnant of the term for 3 (unless *muna-iradu* was the primary form and not *muru-iradu*, which is improbable), we must explain *ai*, *ei*, as a phonetic variation of *e*, if we consider it as 3, 2. In some forms *a*, *ya*, represent the *e* or *i*, and in 6 it is also represented by *a*. There is another and—despite the Uraon and Kol terms—more probable explanation of the S. Dravirian 5. In many quinary systems the term for 5 is the root for 1, or a merely phonetic variety of it, on the same

principle that 10 is named 1 in many denary systems. 5 was "*one tale*," counted on the fingers of one hand, as 10 was "*one tale*," reckoned on the fingers of both hands. One of the forms of the Dravirian definitive, demonstrative and 3rd pronoun which is used as 1 in the term *on*, *nu* &c. is *yan*, *ayi*, *aye*, *ai* &c. This would appear to be the root of 5 in the South Dravirian dialects. (Comp. Tuluva *aye* "he" &c., *ayi-no* "this," *ayi-nu*, 5). *A*, *o*, 6, is still more elliptic than the *ai* of 5, and like it has the form of a mere definitive. The Toda form, *o*, is identified with *on*, 1, in 11, and the term would thus appear to have been a quinary one, 5, 1. In the Appendix, although considering it probable that the root is *a*, I have referred it to *ira*, *era*, 2, the *a* appearing to point to it rather than to *on* &c. 1. But the Toda *o-r*, 6, has the proper vowel of 1, and it occurs in the same form in 11. The Tuluva and Gond *a-ji*, 6, has the postfix of 1 (*on-ji* T., *on-di* G.) and not of 2 (*-du* T., *-nu* G.) The *-ra* of the Mal. 6 corresponds with the *-na* of 1, and not with the *-du* or *-ndu* of 2. (The postfixes of the other dialects are the same, or nearly so, in 1 and 2). The term for 6 would thus appear to have been a quinary one, 5, 1, the word for 5 having been disused for brevity's sake. In many other formations a quinary system appears superimposed on a binary and ternary one or on a compound of both, and it is only in the crudest glossaries that the term for 5 is retained in the higher numbers. The root of the Dravirian 6 is thus merely a variety of that for 1.

The *e*, *ye*, of 7 has the same character. It can only be referred to the *e*, *ye*, of 2 (5, 2). In 8, *e*, *en*, again occurs as the representative of 2, and the formation of this term as 2, 10 and of 9 as 1, 10, clearly indicates that the denary scale was superimposed on an older and more limited one, probably quinary as far as it went, 1; 2; 3; 4; 5; 1, 5; 2, 5. There would also appear to have been a quinary 8 (i. e. 5, 3). In the Appendix the Gond form, *ana-mu-r*, is omitted. It resembles the Tuluva *en-ame* and the Telugu *en-imi-di*. In all these forms the labial unit of 10 has neither the form *v* as in 1 of Telugu and Todava, nor that of *v*, *p*, *b*, as in 10 and the higher numbers in all the dialects. It preserves the *m* of the Kol 1 and of the Dravirian 3. The Gond 10 has the form *pa-da* of Malayalam, while 1 has the form

an-ddi (on-ji Tuluva). The Gond *mu-r* of 8 appears to show that, when the term for 8 was formed, *mu-r* or *mu-ru* was the current form of that for 1. But for the *e*, *en* prefix in all the terms for 8 save the Gond, *mu-r* would be referable at once to *mu-ru* 3 (Karnataka; *mu-nu* Gond). In the same way the Telugu *mi-di* and Tuluva *me* would be referable to a slender form of 3 which is actually current in Todava, *mi-n*. The term for 8 would thus be quinary (5, 3) like 7 and 6. The Gond *an* of *ana-mu-r* is the *an* of the Tamil and Malayalam 5 (*an-ju*, *an-ja*), so that there seems to be no room for doubt as to its true quinary character. The *e* of the other terms appears to be as clearly referable to 2. The Telugu *mi-di* recurs in 9 (*to-mi-di*), where it must represent 1. The forms of 8 and 9 appear to carry us back to the period when the labial kept its place in 1 as well as 3, and had the *m* form in 1 also. The Todava *bo-d* is a near approach to *mo-do*, *mu-du*, *mu-ru*.

The quinary system, in its turn, would appear to have rested on a primitive binary and ternary one; and the series of terms as we now find it has the following sequence of root elements:—1, and also 1 (two roots), *one*; 2, *two*; 1 (for 2, 1), *three*; 2, 2, *four*; 2 (for 3, 2), *five*; 1 (for 5, 1), *six*; (2 for 5, 2), *seven*; 5, 3, also 2, 10, or 2, *eight*; 1, 10, *nine*; 1, *ten*. To those comparative philologists who have not analysed and compared a large number of numeral systems, this reduction of the Dravidian to three roots (two primary terms 1 or I, and 2), combined by binary, ternary, quinary and denary methods, may appear exceptional and fanciful, but the fact is that nearly all numeral systems have been built up in the same mode by a succession of steps. The Iranian, the Semitic, and most of the other Asiatic systems, as well as the allied African, Malagasy and Malagasy-Polynesian, have had a similar history, and under their present denary form preserve vestiges of the earlier modes of counting and forming the names. A large number of African and some Ultrindian and Asonesian systems still retain the quinary terms from 5 to 10 undisguised, and entirely or nearly identical with those for 1, 2, 3 and 4. In most systems 10 is either 1, or 1 followed or preceded by another word. Various illustrations of these facts are given in the Semitic-African sub-section, and they are more fully considered in a separate paper on the numeral systems of the Old World.

The first direction which our search for facts that may help to clear up the obscurities of the South Dravirian system, should naturally take, is to the Kol, Gangetico-Ultraiudian and Asonesian systems. There has evidently been some displacement and phonetic modification of roots in the S. Dravirian system, and in some points the correctness of our analysis cannot be considered as fully established by that amount of mutual elucidation which the S. Dravirian dialects themselves afford.

The Kol dialects preserve a somewhat different numeral system. It appears to have prevailed in Ultraiudia also prior to the introduction of the Tibetan and Sifan modification of the Chinese, for it is now retained—partially blended with the latter—in those Ultraiudian languages which in pronouns and other words, have the strongest glossarial affinities to Kol.* A full list of the variations which the roots undergo, with some remarks on their distribution and the probable course of their diffusion, will be found in the next chapter.

The Vindyan, like the South Dravirian, numerals postfix a possessive definitive, but in place of varying in different terms as it does, to a greater or less extent, in South Dravirian, it is uniformly *-ia* or *-ya* (with a few slight phonetic changes and contractions

* The maritime position and habits of the Mon or Peguans, the evidences of their having been at one time the chief traders to the eastward on the Bay of Bengal, and of their having greatly influenced the other Ultraiudian, the Peninsular and several of the Indonesian races, with the undoubted spread of Vindya-Ultraiudian vocables through their instrumentality to the east and south, led me to surmise that the words common to the Mon-Anam and the Kol vocabularies, had been carried by the Mons from Ultraiudia to the Gangetic basin, rather than by an inland tribe like the Kols to Ultraiudia, and this surmise appeared to be strengthened by the peculiarities of Kol compared with South Dravirian. The 2nd pronoun in particular, with the lower terms of the numeral system, appeared to have a character completely foreign. Amongst the miscellaneous words common to Kol and Mon-Anam vocabularies some were, beyond all doubt, non-Dravirian and of Ultraiudian and Tibeto-Ultraiudian origin. In the Introductory Note to Part II (*ante* vol. vi, p. 658) I therefore remarked that the vocabules of the Mon-Anam formation were not only found in Gangetico-Ultraiudian languages, "but to a remarkable extent in the Kol dialects, proving that the Pegu formation embraced Lower Bengal and a portion of the Vindyas, although the Dravirian basis was preserved in the languages of the latter"; and in Sec. 6 (vol. vi, p. 200) it is said "the phonetic basis of the language [Kol] and many particles and words are Dravirian, but the pronouns, several of the numerals and a large portion of the words are Mon-Anam." At the same time, the influence of the Dravirian pronominal system in Ultraiudia was in several places remarked. A more minute examination of the pronominal and numeral elements of Dravirian, of the foreign continental affinities of the formation, and of its remnants in Asonesia, with the reference of the Kol 2nd pronoun like the 1st to Dravirian, have satisfied me that while Kol, owing to its position, has been influenced by the Tibeto-Chinese formations, as the race itself has by the Tibeto-Ultraiudian, the affinities between it and the Mon-Anam vocabularies are mainly of primary Kol origin. The most probable conclusion is that the Kols are

—as *-ea*, *-e*, *-i*). This postfix is clearly Dravirian glossarially and idiomatically.* It is not found in the Ultraiidian systems, save in some varieties of the common terms which have a great appearance of being contractions of the Kol full forms, and thus support the opinion that the latter were the original. The system is based on definitives or demonstratives like the Dravirian and all the other archaic Aso-African systems, and as the same definitives were common to most of the archaic formations, the Kol terms, like the S. Dravirian, present many resemblances to foreign numerals. These will be found in Appendix A to the next chapter. In this place I will enquire how far the Kol terms are related to the South Dravirian.

The root for 1 is *mo*, which contracts to *m* by the elision of the vowel before the vowel of the postfix (*mo-i*, *m-ia*, *m-ea*, *m-ia-d*, *m-i-dh*,† *m-i*). The Ultraiidian and Peninsular forms preserve the labial vowel (*o*, *u*,) and in some cases remnants of the Kol postfixes; *po* Angami Naga, *bo* Karen, *mno*, *ma-i* Mon, *mo-e* Kambojan, *Ka*, Chong, *mo-t* Anam, *mu-i* Binua. The root, as we have seen, is preserved with the labials *m*, *b*, *v*, *p*, and with the

a remnant of the modified south Gangetic or Bengal division of the ancient Dravirian race. Their dialectic peculiarities of a secondary kind must have been of much later origin than the first spread of Dravirian to the eastward, for the early forms of the pronouns found in Australia are the pure Dravirian. The numerals cannot be explained as a mere dialectic variation of the South Dravirian,—but it is to be remarked that the South Dravirian developed a numeral system itself has no claim to stand on the same archaic footing as the pronouns. The quinary system was not in existence when the formation first spread with its proper pronouns, into Asomesia. The general character of Kol shows that the language must have existed as a separate one from a very remote period. There must have been at least two great and independent Dravirian nations or races, the southern, now represented by the Gent-Tamil peoples and languages, and the Gangetic or Bengal, now represented by Kol. The possession by the latter of a somewhat peculiar numeral system, although a sufficiently remarkable circumstance, is by no means anomalous, especially if the race occupied the lower Ganges and were a maritime and trading people. The more marked deviations of Kol from the homogeneity of the Dravirian system of pronouns and numerals appear to be referable to the ethnic revolution occasioned in the Gangetic basin by the entrance of the Chino-Ultraiidian and Chino-Tibetan race.

* In South Dravirian it occurs under the forms *-ya* or *-ia*, *-iya*, *yô-a*, *-y* or *-i*. The fact of the Kol dialects taking one of the common Dravirian possessives in their numerals and the southern group taking another, is one of those which establish an archaic separation of the two branches. Both systems go back to a period prior to the concretion of the possessives with the numeral roots.

† The superadded dental (*-d*, *-dh*) appears to be the Kol possessive *-t*, and its presence implies that the other possessive *-ia*, *-i* had become concreted with the root. It is remarkable that the Brahui term for 3 has a similar secondary dental, *mu-si-t* (*mu-si* being obviously a variation of the Dravirian *mu-fi* Tul.) The Telugu *to-ha-ti*, has also a secondary *-ti*. The exceptional Kol *-d*, *-dh* probably indicates the influence of a S. Dravirian dialect. The Anam *mo-t* preserves the Kol postfix.

same vowels o, u, in Dravirian proper, vo keeping its place as the unit in Toda and Telugu, and appearing in all the dialects with other forms in 10 and 3, in the latter being identical with the Kol-Ultraindian mu.

2 is bar (*bar-ia*, *bar-ea*). It is preserved in the Ka and Chong bar; the Binua mar, *ha-mar*; and in the contracted Mon ba, Binua ma, Kasia ar, Kambojan *p-ia* (unless this be a misapplication of the Kol 3); be (or *b-e*) Sîmang, hei (or *he-i*) Anam. The term has N. E. Asian and African affinities. The *r* element corresponds with the S. Dravirian 2, *ira* &c, (*ara* in some forms of 6). The *b* may be the *m* of 1 repeated, as in the binary basis of some other systems, but it may, with much greater probability, be identified with the *v* of *avar*, *avara*, *avaru*, *varu*, "they" (i.e. the 3rd pronoun followed by the plural definitive, which is glossarily the same as the dual numeral definitive). The Male bar, (also *war*, *ber*) found as the plural postfix in the 3rd pronoun, gives us the exact form of the Kol term for "two". It may thus have been originally the dual or plural form of the labial definitive which forms the unit, the first two terms of the numeral series being equivalent to "this", and "this *dual*," or "this *plural*," i.e. "these". But the idea of duality or plurality may have become attached to the definitive from its use as 2, in which case the application of bar or ar as a plural definitive would be secondary. The Kol dual postfix -ing, -ng, -n, appears to be a variation of *ir*, *er* &c. 2, similar to the Uraon *en*, but preserving *i* as in several of the S. Dravirian forms.

3 is op, contracting to *p* (*op-ia*, *p-ia*). In Ultraindia it becomes *pu-i*, *pa-i* Mon, *ba-i* Kambojan, *ba* Anam, *wu-i-p* Sîmang (inversion of *pu-i*), *p-eh* Ka, Chong, *am-p-i*, *am-p-e*, *am-p-et* Binua. The term is a modification of the labial unit of Dravirian and Kol; and the Dravirian 3, *mu*, *ni*, has the same root.

4 is *upun*, *opun*, *pan*, *pn*, in Ultraindia *pun*, *bun*, *puan* &c, probably a variation of the labio-liquid 2, which occurs with similar variations in other formations, *bar*, *bur*, *pun* &c. This explanation appears preferable to the analysis *op-un*, *up-un*, *p-on*, that is, the term for 3 followed by a definitive representing 1, identical with the S. Dravirian *on*, *un*, 1. The Kol term is different from the South Dravirian.

5 is mona, mone, moi, mo, muna, mun. It is confined to the Kol and Gond, the Ultraindian terms being different. The first element of the term mo, mu, has the form of the labial unit found in the Kol and S. Dravirian 3. The second element na, ne, n, r, may be the South Dravirian 2, ra, r, er, ren, na, l &c (in 2, 4 &c) or 1, (as in 3), or a mere postfix or final. The term may thus be simply a unit, mo, as in the S. Dravirian system, with a consonantal final, as in 2 and 3, or a postfixed definitive, as in the S. Dravirian 3, mu-ru &c, to distinguish it from the mo of 1, (comp. the Ho mo-ya or mo-ia 5, and the Bhumij mo-y or mo-i 1); or it may be 3, 2, or 4, 1. The analogy of South Dravirian gives some special weight to the first suggestion, and the foreign affinities shew that it is well founded. It results that mun is only a variation of the same definitive that forms 4, 3 and 2, and of which 1 itself is probably a contraction.

6, tur, turu appears to be of undoubted Ultraindian origin [see App. A to Chap. VI].

The remaining terms are clearly Dravirian. They have no Ultraindian affinities.

7. The Kol term like the S. Dravirian appears to be quinary. The Sonthal iair is evidently the full form and the others contractions, the iya, aya, ia and eia representing the ayi, ya &c. of the S. Dravirian 5, and the final -ir, -r, the r of 2, so that ia-ir or ya-ir is still 5, 2.

8 is ir-al, ir-l-ia (in Gond, by inversion, ilh-ar, el-ar-ia). The ir is the S. Dravirian 2, corresponding with e of the S. Dravirian 8. The South Dravirian na-l or n-al 4 is 2 dual. The Kol ir-al is in form dual and may have been the second 4, but it is more probable, from the analogy of S. Dravirian, that the element 2 has reference to 10 and not to 4, that is, the full term was "2 from 10" as in some of the S. Dravirian names. The final il, l, al, may represent 10, for the Kol 10 has the same final.

9 ar, ara (ar-ea, ar-e, ara-iah) has an external resemblance to the S. Drav. 6, ara Mal. (aru, aji &c.), but as there is nothing to shew that the term is trinal, and as the adoption of the Malayalam postfix -ra as part of the root would make the term of much later origin than the other Kol numerals, which must have been formed before the S. Drav. postfixes cohered with the roots, it may be inferred that the only common particle is the initial a, represent-

ing 1. The Kol a-ra would thus appear to be 1 from 10 like the Dravirian term, and, if so, ra, r probably represents 10, as al, il, l, does in the term for 8. The form of the postfix in 1, *ea*, corresponds with that in 10, whereas in the other numerals it is generally *-ia*.

10, *gel-aa* (in a Gond dialect *gil, gul*), is a peculiar term. The guttural is not found in any of the preceding numerals. It may possibly be related to the plural *ko* "these," and, if so, the dual *king* [= *ko* + *ing*] is a similar example of the *o* coalescing with the *i* of the dual. In fact *g-il* or *g-el* and *k-ing* or *k-in* (for *n* replaces *nġ* in some forms) would thus be varieties of the same combination. If *gel, gil* be an integral substantive root it has no affinities in the S. Dravirian or Kol numeral systems. The Taniil *kodi* 20 is a different term, nor has it any relation to the Gurung *kuti* "one score", Gyarung *kati* "one" Magar, Lepeha *kat* "one", Naugaung Naga *katang* "one", Tengsa Naga *khatu*, in all which the guttural is a prefixal def.

The Australian and some other pre-Malagasy systems of Asonesia are more archaic than the Dravirian, for they have not yet raised a quinary or denary superstructure on the binary foundation. Some have only the two primary terms for 1 and 2, which are repeated for higher numbers. Others have a term for 3. Some use plural particles and words in combination with the term for 2, 3, or to express higher indefinite numbers. The more common binary roots have Dravirian affinities.

1. The labial occurs in *li-mboto* Goront. *ri-moi* Ternati, *ipeh* Bruner I., *mo-tu, i-mu-ta* N. Aust., *peer Peel Riv.*, *mal* Karaula, and in the Australian compound terms *ngun-bai, war-at, dom-bar-t, ka-marah, wara-pune, wo-kul, wa-kol* &c.

The labial is the Dravirian unit, definitive and 3rd pronoun, and in Australian it is also common as a 3rd pronoun, and in some languages as a definitive postfix. The final *l, r* of several of the Australian varieties—pronominal as well as numeral—appears to be the liquid terminal and postfix which is so common in Australian languages and is also a Dravirian and Scythic trait. West Australian has *bal* "he," "it" &c. In the Karaula *mal*, the definitive appears in the same form as the unit, and the Bijne-lumbo *war-at, Peel Riv. peer, Kowrarega wara-pune, Moreton Bay ka-marah* are similar instances.

The Dravirian nasal definitive and 3rd pronoun is also Australian, and in some languages it is the unit. Thus *niu*, *ngi*, *no*, are forms of the 3rd pronoun in Kamilarai (phonetically varied by the sexual and directive postfixes), and *ngin*, *guin*, *nga*, are forms of the same root in Wiradurei, the former language possessing also the labial 3rd pronoun, in fem., dual and plural forms. In the Wiradurei *ngun-bai*, 1, *ngun* is the nasal 3rd pronoun, and, what is interesting to remark in reference to the possessive form of the Dravirian numerals, it is not the nominative *guin* or *ngin* but the poss. *gung*. The second element of the compound, *bai*, is probably a contraction of the labial def. which appears in the form *bari* in the 3rd person of the imperative. *Ba*, *wa*, *bala* are also used as the assertive absolute. In Kowrarega as in Wiradurei the nasal def. is found in some forms of the 3rd pron. and the labial in others: *nu-du* "he," *na-du* "she," *pa-le* "they-two".

The Car Nicobar *heng*, *hean*, Simang *ne*, Borneon *nih*, *indi*, *unii*, *enah*, Philippine *una*, *ona*, *uon*, *enot*, Millejuan, New Caledonian *nai*, *nait*, Erub *ne-tat*, may be Draviro-Australian, but it is also explainable as a common insular definitive (identical with the Dravirian) applied to the expression of the unit.

The liquid definitive found as a postfix in Dravirian as in Scythic, does not appear to occur in the known Australian languages as the 3rd pronoun, unless it be identical with the nasal. In many of these languages *l*, *r* is a dual and *n* a plural postfix in pronouns. In some vocabularies *l*, *r* occurs as the unit,—*lua* Gnurelleian, (whence youa Pinegorine), loca Raffles Bay, *roka* Terrutong. But these terms may be contractions of *ngoro*, *ngolo*, *kolo* &c, with the *-ka* post. The Raffles Bay 3, *oro-ngarie* (1, 2) suggests that *lo-ka*, 1, was *ngoro* (as in the Kamilarain *goro* 3, *wa-kol* 1), and *ori-ka* 2, *ngori-ka*.

The guttural occurs as an Australian numeral element both in 1 and higher numbers, but it is doubtful if any of the forms are referable to a guttural definitive. The naso-guttural 3rd pronoun of Wiradurei, *ngin*, takes the form *guin*, and, as the unit, *ngun*, *ngung*,—apparently identical with the possessive *gung*. The West Australian *gyn*, *keyen*, 1, resemble it, and the terms in other languages that have *ng*, *g* and *k* may be also variations of the same root. The Kamilarai *ngoro* (in 3) and *kol* (in 1) appear

to be merely variations of the Wiradurei *ngun*, *gun*. As 3 is 2, 1, or 1, 2, *ngoro* probably represents 1 (the term for 2 having been dropped) and is identical with the *kol* of 1. This is confirmed by the Wollondilly 3, in which *kol* appears (*koll-uér*) and the Karaula 3 (*kul-eba*). The Perth *g-udjal*, 2, (*gyn* 1) is formed from the 3d. pronoun in *g* or *ng* precisely as the S. Australian *p-urla* 2 is from the labial 3rd pron. *Kul*, *gal*, *kar*, *gar*, *gur*, *ngar*, *ngor* are found as terms for 1 or representing it in higher numbers in different languages. In Kamilarai *gala*, *gira*, are used for the assertive absolute as well as the labial definitive. The guttural without the liquid postfix is found as an element in several systems, Raffles Bay, *loka* 1, *orika* 2, Corio *koi-moil* 1, Moreton Bay *ka-marali* 1 (the same compound), Jhongworong *ka-p*, 1, (probably a contraction of a similar term) 1. The Encounter Bay *ki-tye* "he" &c. appears to be another instance of the full gutturalising of the *ngi* preserved in Wiradurei, and analogous to the Perth *gyn* which also retains the slender vowel. The Encounter Bay dual *kengk* appears to be a reduplication (the 1st and 2nd pronouns take dual postfixes *-le*, *-urle*). The plural *k-ar* has the proper dual form. The Australian guttural unit explains the Kol 10 (*gel*, *gil*, *gul*).

2. The E. Australian *bula*, *bul-ea*, *bulo-ara*, *pul-ar*, and the Northern *la-wit-bari* appear to have the Kol *bar*, *bar-ia*, *bar-ea* &c. The Mairasi *a-mui*, Bruner I. *la-mui*, have a singular resemblance to the Kol *moi*, Binua *mui* 1., They are varieties of the root found in Menado *bua*, Tidore *ma-lo-fong*; bu-lango Goront., *pahi-wo* Louis., bo Hunia, buin Tupua, in Gallia. In Australian the term appears, in some cases at least, to be the dual of the labial 3rd pronoun and demonstrative. For example, in South Australian *pa* is "he" &c., identical with the Dravirian *va*, (*ba*, *pa* &c), and *la*, *dla*, *dli*, *rla*, *urla* &c are forms of the dual postfix. The dual of *pa* is *purla* [i. e. *pa-urle*]. The dual of the demonstrative *ia* (Drav.) is a double forms *i-dl-urle*. In the possessive of the 2nd pronoun the dual is also compound *ni-na* "thou," *ni-ica* "you-two," *n-a* "you," *ni-wa-dlu-ko* "you-two-two-of." In several languages the numeral "two" and the dual postfix is a compound similar to the S. Aust. *p-urle*, "it-two," (i. e. "they-two"). The Kamilarai *buloara* and Peel Riv. *pu-lar* are double forms like

it, and the Wiradurei *bula*, Moreton B. *punlah* are single forms. In some cases the double form may be apparent only, for a final *l*, *r*, is found in the singular in some languages, as we have above remarked. West Australian has *bal* "he &c," *baläl* "he-himself" *bula* "they-two" general, i. e. friends, brothers and sisters, *buläla* if parent and child or uncle and nephew or niece, *bulen*, husband and wife. The reduplication of the dual also forms a plural *bula-lel* "they," but the substantival plural or collective postfix is also used in the form *bal-gun*, "they."

The use of a third pronoun dual to denote the dual of substantives, as well as of the 1st and 2nd pronouns, is not an exceptional trait in Australian ideology, for the plural of substantives is also frequently expressed by a 3rd pronoun in the plural. Thus the dual of "dog" would be "dog he-two" or "the-two," i. e. "these two," and the plural "dog he-many," or "the many" i. e. "these." The Kol idiom is so far different that the dual is in form a limitation of the plural, *sita ho* "dog these," *sita k-ing* "dog these-two."

The affinity of the Kol *bar* and Australian *bula* is complete in both elements glossarially, as well as in the compound being similar to the dual or plural of the 3rd pronoun. In the most archaic condition of the system the dual and plural power may have been transferred from the numeral to the pronominal use of the definitive.

3. The same element recurs in the Australian *purla*, *muru*, *burui*, *warh-rang*, *mar-din*, *mur-ten*, *mu-dyan*, *ma-dan*, 3, which resemble the Dravidian *muru*, *muru*, *mudu*, &c. The Australian terms are 2, 1, generally fully preserved, but in a few cases with the 2 or the 1 elided. Thus some of the above terms appear to have the root for 1. *Mar-din*, *ma-dan* &c is the labial unit (mal *Karaula*), with a nasal postfix as in the Bijne-lumbo *war-at*, and the contracted Wollondilly *me-dung* (*dung* for *du*, the common def. postfix), Limbu Apiu *mo-tu*. But without additional vocabularies both of definitives and their numeral and other applications it seems hardly possible to analyse these terms with precision, for the labial enters into both 1 and 2. The nasal final in *din*, *dan*, may possibly be the common Australian plural postfix. In the Kowrarega *ta-na* "these," "they," it appears with the dental definitive as the 3rd pronoun.

4. The Australian terms are binary (2, 2) like South Dravirian, but in general with little or no agglutination.

5. The Mairasi iworo may be connected with the Vindyan mor.

10. The Pagai putu, Totong *mo-put*, Keh wut &c. resemble the S. Dravirian patu, pot &c. The term is a common archaic one (N. E. Asiatic, African).

The following are examples of the pure binary systems of Australian and Torres Strait. Kamilarai, 1, wa-kol; 2, bulo-ara (ara is also used as a dual and plural def.); 3, ngoro, (apparently a flexion of the kol of 1); 4, wa-ran, (a reduplication of the dual postfix). Peel Riv. 1 peer; 2 pul-ar; 3 pur-la (a phonetic flexion of 2). Wiradurei, 1 ngun-bai; 2 bula; 3 bula-ngun-bai (2, 1,); 4, bu-ngu (apparently a flexional contraction of 3, but probably the full term 3, 1). Bijne-lumbo 1 war-at; 2 ngar-gark (i. e. "one-one," the ngar, gar being the Southern ngoro, kol, loka, which preserve the definitive postf. as in Bijne-lumbo); 3 ngar-gark war-at (2, 1) &c. Erub, 1 ne-tat; 2, naes; 3, naes-netat (2, 1); 4 naesa naes (2, 2) &c. &c.

The prevalent Malayu-Polynesian system is the Malagasy which has strong and fundamental Semitico-African affinities, and only very remote ones with Dravirian or Chino-Tibetan. In Asonesia there are also quinary systems and remnants of binary, ternary and senary scales, but as these are in many languages more or less mixed with the Malagasy-Polynesian denary terms, and as the Sifan and Ultraindian systems also contain quinary terms, it will be convenient to postpone the further consideration of the insular systems till the Ultraindian have been examined.

The Chino-Tibetan and Ultraindian numeral system differs from the Dravirian, although one or two elements are common to both.

From the above facts we are justified in the inference that there was an archaic binary numeral system which spread from India to Asonesia, and that in later eras larger systems were built on it, generally by quinary and denary methods, but with the ancient binary elements chiefly.

These later formations were entirely independent in India and Asonesia. The Australian systems are still essentially binary. They have not become even quinary, the few terms beyond 2 being chiefly variations of the lower terms. The series is still 1; 2; 2, 1;

2, 2 &c, but with some elisions, contraction and replacements.

In India and Ultratania, only two systems remain of the ante-Chinese era, the Dravirian and the Kol-Ultratindian,—the latter however presenting two varieties, the Kol and the Mon. The Kol is quinary and denary like the South Dravirian, and it has been formed from the same elements. But while the general method is the same, even to the preservation of possessive or qualitative postfixes, there is a deviation in the mode of forming one or two terms, and the elements in the lower numbers are in some cases differently applied. The two systems were therefore independently formed from common materials at a very ancient period and before the various elements had become concentered.

The most archaic term for 1 appears to have been the labial vo, mo, mu, bo, po, ba, pa &c. It is found in S. Dravirian, Kol, Ultratindian, Australian and a few other Asonesian languages. It is the definitive and 3rd pronoun common to Draviro-Australian with Sifan-Ultratindian.

In all the dialects of the Gondo-Tamulian branch of Dravirian, save Toda and Telugu, it has been superseded by another Dravirian definitive, on, un, or, which is also found in Australian as a 3rd pronoun and unit. It occurs as a definitive and as the unit in Lau and in various Asonesian systems.

Australian has a third term, kol, kul, &c, which appears to be preserved in the Kol 10.

For 2 the S. Dravirian root appears to be a contraction, ir, er (en, re), euphonically vocalised into ira, era, (eno) before the consonant of the possessive postfix. It enters into the Kol bar, Ultratindian bar, mar, and the Australian bul, pul, bula, bari &c. In Australian it appears in 1 under the forms bar, wara, mara, and in 3 as mur, bur, pur, mar. The variation of the vowel from u to a which appears in the Kol and in some of the Australian terms, is found also in South Dravirian higher numbers, as well as in the postfixed definitive. The Australian terms show that the Kol compound is not a comparatively recent one, and a similar inference may be drawn from the Dravirian 3, as well as from the preservation of the same compound in the plural of the Dravirian 3rd pronoun.

The S. Dravirian 3 is the labial unit repeated as in other binary

systems. In the original crude form of the system it must have been preceded by the term for 2. The inverted Kol form *op* may indicate that a partial accommodation had taken place between the labial and the prefixed term for 2 (*bar-op-ia*, *bar-p-ia*, for *bar-mo-ia*, *bar-po-ia* &c). The Australian terms coincide so closely with the South Dravirian that it might be supposed they preserve the South Dravirian possessive postfix, but it is probable that the final *r*, *ru*, *ra*, &c. is the numeral element, as in the lower numbers and in the Kol 2. The Wiradurei *bula-ngunbai* (2, 1) preserves both terms. The Kamilarai *n̄goro* has rejected the term for 2 like the Dravirian words. The Peel River *pur-la* preserves the word for 2 (*pul-ar*), varied by a slight inversion, and rejects that for 1. The Erub like the Wiradurei is 2, 1.

The South Dravirian 4 is binary, 2, 2. The Kol-Ultrai Indian is probably also binary. In Australia some of the languages, with Erub, have 2, 2, and others 3, 1. The Kamilarai *ran* of *ra-ran* is a flexional reduplication of the *ara* of *bulo-ara*, 2, as the Dravirian *nal*, *non* is of *ra*, *no* 2. The two modes of expressing 4 probably prevailed in India prior to the Asonesian migration.

The Australian numeral system is identical with the basis of the Dravirian. The full Kol terms shew this identity more clearly than the S. Dravirian. The first five numerals are repetitions of the same labial-liquid root, and the Australian system explains how this arose. 2 was 1, 1; 3 was 2, 1; 4 was 2, 2; and 5 was 1. By the dropping of some of the terms in the compounds, and by variations in those that were retained, each numeral ultimately acquired more or less peculiarity in its form. The Kol series resembles the simpler Australian, such as the Peel Riv. *peer* 1, *pular* 2, *purla* 3. But most of the Australian have 2 elements, and thus resemble the S. Dravirian more than the Kol.

The forms of the numeral roots, and their relation to the forms of the parent definitives in the different dialects of Dravirian, show that there has been some displacement in most of these. An assimilative process has been in operation more than once, with relation to the 3rd pronouns as well as to the numerals, to the possessives and other particles, and to many substantive words. It may be possible to trace from what dialect *va*, and not *ma*, *vo*, *wu* &c., became the prevalent 3rd pronoun,—*du*, *ru*, *tu*, the most prevalent possessive and qualitative both in pronouns

and numerals, and not the Ancient Tamil and Kol iya, ia &c.,—on, the common form of 1, and not the labial or the other forms of the nasal definitive, an, yan &c.,—mu the numeral 3, and not vo as in 1, &c. &c. Such a research into the dialectic history of Dravirian would carry us beyond the scope of our present enquiry, fruitful though it probably would be in data illustrative of Australian and early Asonesian philology.

From the accordance between the definitive and numeral systems both in Dravirian and Australian, it is clear that the latter system is equally native with the former in its elements and in their combinations in the lower numbers. Any foreign affinities not due to the spread of the Dravirian terms themselves, must hence be considered as indications not of a derivation of the numerals from another formation, but of a primary community of roots between Draviro-Australian and certain other archaic languages. Such affinities go beyond the history of Dravirian in all its later pre-Arian stages, and even beyond its crude Australian stage. They are vestiges of a period when the mother Draviro-Australian language was, in roots at least, only one of the dialects of a formation that was subsequently to be variously modified and developed in different regions and under different influences. The superimposed quinary and denary systems, with the Dravirian mode of forming 8 and 9, indicate affinities belonging to much later periods. The civilization which originated them was unknown to Draviro-Australian at the time when the early Asonesian migrations took place. It may be possible to connect their introduction with that of other words indicative of a range of ideas and of art above the Australian, and to find in them traces of a pre-historical intercourse of other civilised Asiatic peoples with the ancient Indians. The gradual departure of the Indian physical type from the Australian towards the Scythico-Semitic may also be found to synchronise with the progress of the changes in the vocabulary.

The Dravirian systems have no decided affinity with the adjacent Iranian, Semitic or Caucasian. But several of the terms belong to ancient Asiatic formations which appear to have predominated prior to these. The terms in question are found in the Ugro-Koriak languages on the North East, and in the Semiteo-African on the South West.

province its occurrence in 4 is also explained by its presence in 2 (ri, ar, li, &c). It is found in both the forms of 2, na, ni, &c. and far, fur, &c. contracting to ar as in the corresponding terms for 2. The Indo-European t-var,—in which the dental appears to be a distinct element as in 3, t-ri, and 2, d-wa,—contains the same root, and is a similar form to the Scythic d-wa-ta, d-u-r-ta &c., the d-wa of 2 being the same term, with the liquid elided. From the distribution of the liquid it is probable that it was current in some diffusive Mid-Asian system before it spread as 2 and 2 dual to India, Africa and Northern Asia. The Kol labial 4, is a similar binary term to the Semitico-African far &c.

The S. Dravirian 5, seems to be also purely native. The Kol labial term has affinities with those Scythico-African systems in which the labial unit recurs in 5 and frequently in 10 also. The S. Dravirian labial 10 is a common Aso-African application of the labial unit. The archaic African forms in 5 and 10, pu-na, po-na, mo-n, fu-n, bu-re, ma-r, vu-lu &c. and the forms of the same term in 1, 2, 4, 6, &c. (mal, bar, wan, mo-r, wo-ro, &c. &c.) resemble the Dravirian more closely than the Scythic in which the final element is usually the sibilant. The expression of 5 by a unit, and the formation of higher terms by using 5 as the radix (now generally elided or understood), appears to have preceded the denary scale in every province of the Old World save the Australian. In most of the formations of Asia the quinary system is found either as the ultimate one, or with some of its terms keeping their place under a decimal system. It is still very prevalent in Africa, and many of the African systems, like some of the Asonesian, Ultraiidian and N. Asiatic, have the quinary terms entire and undisguised.

The formation of lower numerals by subtraction from higher, is found in many systems in different parts of the Old World, (Asia, Africa, Asonesia), and also in America. That of 8 as "2 short of 10" is less common than 9 as "1 short of 10." The fact of such a term for 8 being common to Ostiak, N.E. Asiatic and to some Indonesian languages was remarked by Dr Peacock in his excellent treatise on arithmetic. In several of the N. Asiatic languages both the quinary and denary modes of expressing 8 and 9 are used. In Aino-Kurilian all the numbers between 5 and 10 are denary,

6 (4, 10), 7 (3, 10), 8 (2, 10), 9 (1, 10). In the Semitico-African systems, terms for 7, 8 and 9, formed in the same mode, occur in several languages.

The combination of servile definitives with those which are used as numeral roots, is common to nearly all formations, although in many of the agglutinative and flexional the two elements are more or less conereted, abraded and disguised, and the accordance between the postfix and current possessive or qualitative particles has seldom been preserved. The Dravirian postfixes -du, -ru &c, di, -ti, -ji &c, and -ia are not prevalent in the Seythie numeral systems. They are Caucaso-African. In the Semitico-Libyan systems the dental is a common postfix with numerals. In that formation it has acquired a feminine power, but it appears to have been originally common.

From these notices it appears that the Dravirian system in its ultimate definitive roots, in its successive developments or acquisitions of binary, quinary and decimal modes of numeration, in the mode of expressing the numbers immediately below 10 with reference to it, in the recurrence of the unit to express 5 and 10, and in the use of servile definitives with the numeral roots, resembles most other decimal systems in the world. The roots are found as definitives in many other formations (Seythie, Tibeto-Ultrindian, Caucasian, Semitico-African); and in many other languages they are also used as numerals and numeral elements. The Dravirian system has this peculiarity, that in Asonesian languages we have its purely binary stage preserved to this day. Until all the Aso-African and the connected American numeral systems have been thoroughly analysed and compared, it does not appear possible to trace the later developments of the Dravirian to their historical causes. The system certainly has not been borrowed from any of the later dominant races of S. W. Asia on the one side (Iranian, Semitic, Seythie), nor from the Chinese on the other. It has elements in common with most of these systems, and it must be considered as equally archaic and independent. Its connection with them must be exceedingly remote. It belongs to an era when neither they nor Dravirian had taken their existing forms. The numeral application of the definitives probably originated in a proto-Seythie formation, like

The labial unit is found in the N. and E. Asian systems, but it is much less common as a definitive and unit than the sibilant, (varying to dental, guttural &c.). From its more general occurrence in some higher numbers than in 1, it is probable that it was of greater importance in an archaic stage of the Scythic systems. It is still found as 1 in Japanese, Turkish, Tungusian and some Ugrian languages. As 2 it is found in remote Eastern languages, Namollo, Korian and Japanese, and as an element in some Ugrian terms. As 3 it is Japanese. It does not occur as 4. In 5 it is Kamschatkan, Koriak, Ugrian and Turkish. In 6 it is found in Japanese and Samoiede, and as an element in Namollo (2) and Ugrian (1); in 8, Namollo, Chinese and Ugrian; in 9, Namollo and Ugrian; in 10, Kamschatkan, Aino, Tungusian, Samoiede, Ugrian and an element in Namollo; in 100, Chinese; in 1,000, Turkish and Mongolian. As a definitive the labial is very archaic in the N. and E. Asian languages. As a concentered postfix it is found in Scythic vocabularies. In Yeniseian it is still current as the 3rd pronoun, bu, ba-ri. Turkish also preserves it in bu, and Samoiede in pu-da, py-da &c. [See the remarks on the Dravido-Australian 3rd pronoun, *ante p.*] In the Scythic languages the sibilant (or guttural) with the liquid postfix predominates as the 3rd pronoun,—son, sin, kini, tha, sya &c. The history of the labial unit and definitive in the Semitico-African systems is of a similar tenor. In the Semitic branch it is only used as an ordinal, the cardinal being the common Scythic and Indo-European guttural, aspirate &c. In Africa several languages retain it as the cardinal, and it re-appears in higher numbers. The common form wal, war, bar, bari, mal, &c. is the same as the Dravido-Australian. The Turkish bir, a variation of the Scythic bis &c. of higher numbers, is a similar form. The prominence of the labial, and the absence of the sibilant, unit is one of the chief peculiarities of the Dravido-Australian system when compared with the N. and N. E. Asian, the Caucasian, the Indo-European and the Semitico-African. In this respect it appears to preserve a more antique character than those in which the labial has given place to the sibilant &c.

The Dravido-Asonesian nasal 1 is Indo-European, Mongolian, Samoiede and Koriak. It is referable in these formations, as in the Dravido-Australian, to a pronominal root. Semitico-African

has *la* variable in higher numbers to *le*, *ne* &c., but it is very rare and may be from the labial, *ba*, *bal*, *bar*, *ban* &c. The Australian *kol*, *kul* &c. and *Kol gel*, *gil*, *gal* is a unit and 3rd pronoun in N. E. Asian languages, and it is also found in the Semitico-African numeral systems.

The Dravido-Australian contracted root for 2 (*ir*, *ar*, *ra* &c.) is Chinese, Japanese, Ugrian, Caucasian, Indo-European (in 4), and Semitico-African. The combination with the labial as the initial element occurs in *Namollo* (*mal*), and it is common in Africa, which it appears to have belonged to a predominant Semitico-Libyan numeral system, of which the Semitic, in its present condition, may be considered as a remnant. Semitic in its existing form has the sibilant and not the labial initial (*ath-in*, *si-l*, *ta-r* &c.), in this resembling Mongolian, Tungusian, Samoiede and Caucasian terms (*si-ri*, *ds-ur*, *ko-ir* &c.). But in 4 it appears to preserve a contracted form of a common African term (*ba-r*, *ma-l*, *ba-ni*, *bi-ni*, *bi-ri*, *vi-di*, *fu-la*), identical with the *Kol-Australian*. In the occurrence of the labial both in 1 and 2, as well as in its form, the archaic Dravido-Australian system is cognate with the archaic Semitico-Libyan. In the general dual and plural force of the second element, *n*, *l*, *r* &c. they also resemble each other and Scythic. In all the formations this generic application appears to have arisen from the use of the particle as a numeral.

The Dravido-Australian 3 is peculiar. The labial does not appear to occur as a root for 3 in any of the Aso-European or African systems, save in the Turkish *wise* and Japanese *mi* (whence *mu* 6, i. e. 3 dual). In the other systems the sibilant unit has as much currency in 3 as in 1. In its double form, or with the second element as a liquid, it is common to N. and E. Asian, Indo-European and Semitico-African systems. In this numeral Dravido-Australian shows its primitive and persistent character more even than in its 1 and 2.

The S. Dravirian root for 4 is Ugrian and Semitico-African, and the reduplicated form is found in both of these provinces. In the Ugrian it may be referred to the Chino-Tibetan *ir*, *il*, *li*, *ni nyi* &c., as an archaic Asiatic definitive for 2, preserved in the Dravirian 2, 4 and higher numbers. In the Semitico-African,

the definitives themselves, and the African affinities are probably owing to derivation from a like source. The African terms present more affinities in roots and combinations than the Scythic, but Scythic has remnants of similar forms.

The African affinities connect the Dravido-Australian quinary or basis system with the most archaic form of the Semitico-African system more closely than with any other. But the former is simpler and more primitive than the latter, in which the sibilant series of terms, found in all the Asiatic systems, blends with the labial and preponderates over it. The African systems appear to have been more influenced by the Semitic in its later gradations, and the Semitic by the Scythico-Iranian, than the Dravido-Australian by any foreign systems. The Dravido-Australian would appear to be the most faithful representative now existing of an archaic S. W. Asian system of definitives and numerals. This system is still homogeneous, the labial being the principal current definitive as well as unit. In the Semitico-African systems there are remnants of the labial pronoun, but the sibilant is now the principal one. The labial unit of these systems is hence more closely connected with the existing Dravido-Australian, than with the existing Semitico-Lybian, pronouns.

It is worthy of remark that the Euskarian, which has close affinities with the oldest form of the Semitico-African systems, preserves a labial 1 *ba-t*, *bo-t*, 2 *bi*, and 5 *bo-r-t z*, *bo-st*. It is found also in 9, *be-dera-tzi*, and 10 *ha-mar* (*ante*, sec. 5). The Caucasian, like the Scythic, Semitic and Indo-European, is mainly sibilant, but there are some labial remnants, 2 *wi-ba* Abkhasian (Eusk. *bi*, African *bi-li*, *bi* &c.); 3 *ab-al* Lesg., (but this is probably a contraction of *chab* in which the initial is sibilant as in the Georgian *sa-mi* &c.); 4 *wor-ts-teho* Georg., *mn.uk-ba*, *boo-gu*, *ohw-al* Lesg., *p-shi-ba*, *p-tle* Circ.; 5, *wo-chu-si* Georg., *p-chi* Mis.; 6, *f-ba* Abkh.; 7 *s-wi-di*, &c. Georg., *wex-al* Lesg. *buor*, *nor-l*, *nosh* Misj., *b-le*, Circ., *bish-ba* Awar.; 8 *rwa*, *ruo*, &c. Georg., *mitl-go*, *mek-go*, *betel-na*, *beetl-gu*, *mei-ba* &c. Lesg., *bar*, *bar-l* Misj.; 9, *b-gu*, *boro* Circ.; 10 *wit*, with Georg., *wex-al* Lesg. *p-she* Circ. In some of these terms, however, the labial is probably prefixal.

The labial system would appear to have predominated in S. W. Asia and spread thence to India and Africa before the

sibilant acquired its present prominence. Both terms may have co-existed as definitives and units in the oldest pronominal and numeral systems, although their relative importance varied in different eras. The acquired sexual application of the two definitives, and the proneness at one time to extend the application of the masculine and at another that of the feminine to inanimate substances, would account for this. The later tendency to throw off the distinction of gender, and to retain only the form in most common use, ends in a still greater impoverishment of the original variety of forms and terms. The Dravido-Australian, like the Tibetan and some other Asiatic systems, has no trace of gender in its labial definitive. In the Semitico-Libyan the labial and sibilant appear to have been also originally common, but at an early period the former became masculine and the latter feminine.

The system may be considered as of equal antiquity with a very archaic formation which was diffused on the one side as far as Africa, and on the other over Central and Eastern Asia. Although the system, both in its terms and in the principle of its formation, has affinities with other languages, it cannot be derived as a whole, or even in the bulk of its materials or in the model of its construction, from any other now extant. The affinities, however, point distinctly to S. W. Asia more immediately, and to an epoch anterior to the diffusion not only of the Semitico-Libyan and Iranian but of the Caucasian systems. It appears to be of the same archaic origin as the basis of these systems themselves and of the other systems which were dispersed over Asia before the former began to predominate. The Ugro-African affinities of the Dravidian establish this. There is another test of its relative ethnic position. The remotest and least advanced Asiatic and American systems have only terms for 1 and 2, for 1, 2 and 3, or for 1, 2, 3 and 4. This may be said to be the case with that of the Australian formation, the general Dravidian affinities of which are strong. The Australian proves that the primary Ugro-Dravidian formation prevailed in S. W. Asia, including India, at a barbarous epoch, prior to the expansion of the simple numerals 1, 2, 3, into higher binary and ternary terms by combination and acquired flexion, a process which preceded the adoption of the quinary and denary scales in S. W. Asia, as is testified by the

Iranian, Semitic, Caucasian and other Asiatic and African systems retaining terms so formed. The Dravirian numerals belong to the same era of S. W. Asian civilisation that gave birth to these improved systems, and they must therefore have been brought into use in India long subsequent to that period of its history represented by Australian civilisation. The denary system was not imported by the earliest race, whether Negro or Australian, which laid the foundation of the Indian languages, but by a subsequent race from S. W. Asia, whose civilisation was connected with that in which the subsequent Semitic and Iranian diffusions originated. The Dravirian numerals are not derived from any of the leading Asiatic systems, and their connection with these is extremely remote. The Turkish and Ugrian systems are nearer to the Caucasian on the one side and to the more remote N.E. Asiatic on the other, the Iranian is nearer the Semitic, and the African are nearer the Semitic, the Iranian and the Scythic, than the Dravirian is to any of them. The introduction of the denary scale into India is probably connected with the advance into it of one of those Scythoid races of partially Irano-Semitic character, the archaic influence of which on the physical form of the Southern Indians is so observable. The Todas may be nearly pure descendants of the very race which imported the system.*

III. MISCELLANEOUS WORDS.

For the miscellaneous glossarial comparisons of the Ultraindian and Indian division of the present enquiry, it will be convenient to take the list of sixty miscellaneous substantives originally com-

* Dr Stevenson in his "Collection of words from the Toda language" (Journ. Bombay As. Soc. i, 155, for 1842) gives some foreign affinities. For 1 he adduces the Latin unus, Tungus. mukom, Koibal unem. 2, Tungus. djuhr, Arm. vergu. 5 Chinese ing. 6 Turkish alti, Yenik. ram, again. 7 Arm. yeom. 8 Arm. ot, Lat. octo, Eng. eight, Sansk. ashta. 9 he explains as 1 less 10. 10 he compares with the Tibetan bachu, but [the true Tib. form is *bcu* in which *b* is prefixal and unconnected historically with the Drav. labial root, save in so far that both are ultimately the same definitive].

The Rev. Bernhard Schmid, in his "Essay on the Relationship of Languages and Nations" (Madras Journal v, 133) had also previously (1837) given tables in which the Dravirian numerals are compared with a great variety of foreign ones, but his affinities are too indiscriminating. As I had not read this paper when my comp. voc. was printed I give his list (p. 157) of the Toda terms, which contains some variations not found in my voc. 1 odd, corresponding with Dr Stevenson's *orr* and a contraction of *vodda*. 2 *atu*, *ait*. 3 *muthu*, *mud*. 4 *muk*, *nank*. 5 *u*. 6 *or*, *od*. 7 *or*, *ud*. 8 *otthu*. 9 *unboth*. 10 *pothu*, 11 *ponned* &c.

[Some remarks on Dr. Müller's comparisons of Dravirian with Scythic numerals will be found in another place.]

piled by Mr Brown in twenty two Ultraindian and East Himalayan languages, and to which other Ultraindian and many Gange-tic languages have been added by Mr Brown himself, Captain Playre, Mr Hodgson and others. Mr Hodgson has adopted this list of substantives for his series of comparative vocabularies, adding to it a large number of words of other classes. I have used the vocabularies of the South Indian languages compiled for him by Mr Walter Elliot and others, and which have been already mentioned in another place, but I have also taken words from my own smaller comparative vocabulary of above 300 words in the compilation of which all the vocabularies and dictionaries within my reach have been availed of. It will be borne in mind that the present paper is mainly directed to phonetic and grammatical affinities, and that the vocabulary in question belongs to the glossarial branch of the Asonesian affinities which will be examined separately. I do not of course assume that the absolute glossarial affinities of the Indian and Ultraindian languages will be accurately represented by the results of an examination of Mr Brown's 60 substantives, and of the pronouns, particles and numerals which have been already adverted to. A collection of whole vocabularies will probably greatly diminish the amount of agreement, because most of Mr Brown's words are of classes that are very subject to diffusion and displacement. It is totally deficient in those words expressive of the most generic actions and attributes which appear to me to be more persistent than other.

The following is Mr Brown's vocabulary. I have added numbers in order to save the repetition of words in some of the comparative lists, given in the next chapter.*

1 Air	5 Blood	9 Cat
2 Ant	6 Bont	10 Cow
3 Arrow	7 Bone	11 Crow
4 Bird	8 Buffalo	12 Day

* I have only been able to compare about 40 terms in the list with a large range of foreign vocabularies. Two of them "Name" and "Village" are not included in my own comparative vocabulary, and several of the others, such as Ant, Buffaloe, Elephant, Flower, Goat, Hog, House, Light, Monkey, Musquito, Oil, Plantain, Root, salt, Skin, Snake, Tiger, Tooth, Yam, are not included in most of the shorter of those vocabularies which have contributed to its compilation. The omission is especially to be regretted in the case of many of the Seythie vocabularies in Klaproth's great collection.

13. Dog	29 Horn	45 Plantain
14. Ear	30 Horse	46 River
15. Earth	31 House	47. Road
16. Egg	32 Iron	48 Salt
17. Elephant	33 Leaf	49 Skin
18. Eye	34 Light	50 Sky
19. Father	35 Man	51 Snake
20. Fire	36 Monkey	52 Star
21. Fish	37 Moon	53 Stone
22. Flower	38 Mother	54 Sun
23. Foot	39 Mountain	55 Tiger
24. Goat	40 Mouth	56 Tooth
25. Hair	41 Musquito	57 Tree
26. Hand	42 Name	58 Village
27. Head	43 Night	59 Water
28. Hog	44 Oil	60 Yam

In estimating the per-centage of affinities I have added 40 words of different classes to complete the hundred. A numerical mode of stating the amount of agreement has been adopted because it is the most definite whatever be the extent of the vocabularies collated; but the value of the result varies of course with the kind and number of the words compared, and all deduction from purely glossarial data must be taken in combination with the evidence of other kinds as to the past and present relations of the tribes themselves. The absolute proportions obtainable from a comparison of entire vocabularies will probably differ greatly from those derived from 100 words. But the relative proportions will not be affected in an equal degree by enlarging the basis of comparison. For example the affinity of the South Indian vocabularies with the Gond may prove to be only 25 per cent. But if so that with the Kol will probably be reduced in a proportion not very dissimilar, so that the relative amount of the South Indian affinities of the Kol and the Gond will not be seriously affected.

In tracing the glossarial history of any formation we must begin with the modern changes. For general ethnology also this is the best course, because the only scientific principle that can guide us in our enquiries into pre-historic events is that nations and their

languages have always been subject to changes similar in kind to those which are now going on in the world, and have been doing so throughout historical periods.

In India the Dravirian formation has ceased to be diffusive and assimilative. It has long been exposed to the influence of the Sanskrit and of the northern Indian tongues that were early assimilated in a greater or less degree to Sanskrit. In the Dravirian family we have therefore to note the mutual action of the different languages and dialects, and the action on each of the Sanskrit and of the Sanskritised or prakrit tongues of the north. The very close degree in which the Dravirian languages of Southern India are related to each other and to the least Ultraindianised languages of the Vindyas, in phonology and ideology, has appeared from the details in chap. IV. They are dialects of one tongue, and they appear to differ less from each other than the Philippine languages. The dialectic discordances are exactly the same in kind as those which prevail amongst the Philippine and other groups of Asonesian languages, or amongst the Asiatic members of the Semitico-Libyan formation. All the great families that have been recognized show much larger mutual deviations in their component languages, and we must include Australian to give the formation a comprehensiveness similar to the Scythic or the Semitico-Libyan. Even the Indo-European and the Malagasy-Polynesian are much more diversified than the continental or Kol-Tamulian division. All these widely disseminated families present single languages or groups that, from long and complete separation, have become alienated from each other in the greater number of their roots, in phonology and even in many details of ideology. The transitions are seldom so abrupt as from the Dravirian to the Australian, but this arises from the former being only the last continental and the latter the last insular remnant of a once continuous and widely expanded family, that was early disjoined, and has ever since been subjected in its two divisions to the influence of formations of opposite character,—the Scythico-Iranian tending in the continental division to give a more flexional development to the primary structure which it has in common with them,—and the Niha-Polynesian tending to arrest the natural flexional development and concretion of the insular division, and

to maintain the archaic crudeness of the type while partially transforming it. But some of the contrasts found in other families are as great or nearly as great in degree, as, for example, that between English or Celtic and Sanskrit,—Semitic and Egyptian,—Malay and Tagala—Polynesian and Malagasy,—Manchu and Fin &c. Of such degrees of dissimilitude as that between the Kol and the proper Dravirian group most large and partially mixed families present several examples.

On the subject of the connection amongst the South Dravirian languages Mr Ellis' observations may be cited. "The Telugu, to which attention is here more specially directed, is formed from its own roots, which, in general, have no connexion with the Sanskrit, nor with those of any other language, the cognate dialects of Southern India, the Tamil, Cannadi &c. excepted, with which, allowing for the occasional variation of con-similar sounds, they generally agree: the actual difference in the three dialects here mentioned is in fact to be found only in the affixes used in the formation of words from the roots; the roots themselves are not similar merely, but the same." (Note to the Introduction to Campbell's Telugu Grammar, p. 3.)

It must at the same time be remarked that for many ideas there is more than one native or at least pre-Sanskritic root current, and that the different vocabularies even of the southern group often affect different roots. This feature does not militate against the assertion that the disparities are merely dialectic, for it is common to the Dravirian with every other ancient cluster of dialects. As in other provinces, the capacity for the currency of numerous roots was probably much greater in the earlier ages of the family, when its tribes were more barbarous and more divided. The progress of the great civilised nations and their mutual glossarial interpenetration and assimilation, must have been attended, as in other cases, with the partial obliteration of the vocabularies of subdued or absorbed tribes. In the primary Draviro-Australian era, the number of distinct vocabularies and independent synonymous roots was probably very great; and the difference between the Kol and the Gondo-Tamulian vocabularies shows that in India, even to the latest period of Dravirian predominance, the North-Eastern dialects presented a considerable con-

trast to the southern. So long as dialects spoken by independent or separate tribes exist, the number of roots has a tendency to increase, each dialect being a distinct inlet for foreign words, which may or may not pass by slow degrees into circulation in some or all of the other dialects also, that depending on the nature of the relations amongst the tribes. A gradual and very great glossarial divergency is consistent with the retention of the leading characters of the formation in phonology, ideology and even in glossary. The Indo-European, the Niha-Polynesian, the Tibeto-Ulraïndian, the Scythic, the Semitico-Libyan and all other formations furnish evidence of this. On the subject of the more recent interpenetration of the South Dravirian glossaries Mr Elliot remarks: "All the southern dialects become considerably intermixed as they approach each other's limits. Thus the three words for "egg" used indifferently by the people speaking Canarese, (matté, tetti, gadda) are evidently obtained, the first from the Tamulian, matta; the last, from the Telúgú, gadda. This intermixture, which is of ordinary occurrence in all cognate tongues, is here promoted specially by extensive colonization of different races, as of the Telúgús into Southern India under the Bijaynagar dynasty, where they still exist as distinct communities—and of the followers of Rámanúja Achárj into Mysore, where they still are to be seen as a separate class speaking Tánail in their families, and Carnátaca in public. The Reddies also, an enterprising race of agriculturists, have migrated from their original seats near Rajahmandry, over the whole of Southern India, and even into the Maháráshtra country, where they are considered the most thriving ryots, and are met with as far north as Poona." (Journ. Asiatic Soc. vol. 18 p. 350).

So far as the testimony of the 100 words which I have compared can be relied on, the South Indian or purest Dravirian vocabularies would appear to have 30 to 40 per cent of their words in common with Gond, Male and Uraon; and less than 15 per cent with the Kol dialects. The specific affinities with the Middle Gange-tic, the Himalayan and the Ulraïndian languages, though considerable as a whole, are so slight for any particular language or group, that it would be unsafe to state then at even a very low number, without a comparison of much larger vocabularies. A few Dra-

virian words are found in Dhimal, some of the Manipuri dialects and Burman.

The Gangetic vocabularies of the Tibeto-Ultraindian and Tibetanised class have many words that appear to be archaic Indian or Dravido-Australian, although not now extant in the South Dravirian languages. The most western, as Tiberkad and Milehanang, present affinities with Eastern Medo-Persian vocabularies. Some of their non-Tibetan terms are clearly ancient Gangetic, for they are found in Asonesia.

The affinities with any single Asonesian language are few, but with the Asonesian vocabularies as a whole they are perhaps more numerous than with those of any other province save the Seythie in its widest range (Caucaso-Koriak). The Australian affinities are far from being the most numerous. Dravirian vocables are found in all the Malayu-Polynesian languages, and as several Dravirian synonyms and varieties of the same root are extant in different vocabularies although not found in Australian, it appears that the Dravirian glossarial current not only set to the eastward in the first Australian era, but continued to do so while changes were taking place in the Indian languages themselves, or in the distribution and predominance of the tribes who spoke them. In the earlier ages of this current it must have chiefly flowed from Bengal along the western seaboard of Ultraindia, and it is to be presumed that the dominant tribes and vocabularies of the Lower Ganges were more or less changed from era to era by the intrusion of other Dravirian tribes from the interior, and by foreign influences transmitted from Irania. In later periods they were affected not only by the ethnic current from Irania down the Gangetic basin, but by the Chino-Tibetan movement from the eastward. As soon as navigation was sufficiently improved to allow of a maritime intercourse along the coast of the Bay of Bengal, the population and languages of the Lower Ganges would be affected by the powerful South Indian nations and by foreign visitors from the west, while the continental and Singhalese South Dravirians themselves would then, for the first time, be enabled to carry on a direct intercourse with Ultraindia and Indonesia. It is probable, from glossarial evidence, that the Dravirians were civilised and maritime before the Arians predominated

in N. India. The influence of a Gangetic sub-formation akin to the Kol is still distinctly traceable in Indonesia, as will appear in a subsequent place.

The remnants of the Dravirian formation in the other existing languages of Northern India, and especially of the Gangetic basin, are of great importance for Asonesian ethnology. It is obvious that from the first era of the Draviro-Australian movement towards the further east, when rude tribes like the Sîmangs and Australians roamed in the Sunderbunds and crept along the creeks on rafts or skins, to the period when civilised Dravirians and Ultraindo-Dravirians navigated the coasts in paravus and spread their maritime art to the remotest islands of the South Sea, the Gangetic population must have been the principal, and, in general, the sole, disseminators of Indian vocables in that direction. Hence a knowledge of the Gangetic tongues in every age, and under each of the great changes they have undergone from the influence of intrusive formations or languages, is essential to a thorough investigation of Asonesian history, and whatever vestiges are recognized of their pre-Sanskritic condition and possessions have an immediate value for that purpose. It has already been remarked in an earlier page, that not only the Vindyan dialects but the Marathi-Bengali or Sanskritised languages of Northern India, present, in their non-Arian element, proportionately more numerous and direct affinities with the Indonesian languages than the South Dravirian. The glossarial and other affinities between the Asonesian formations and the Dravirian will be separately examined. It is sufficient here to indicate their existence and extent in proof of the great antiquity of the latter in India, and of its having exercised a predominant influence in the eastern archipelago not only prior to the Papuan era but subsequent to it, for the Malayn-Polynesian civilisation was not purely Ultraindian or Chino-Tibetan but Gangetic or Draviro-Ultraindian.*

* Several examples of this class of affinities will be found in the annexed vocabulary. I take a few words at random from other classes.

Straight.

The Dravirian *sarta*, *sariada*, *sariga* &c. is Arian. *Timunga* *Tolu* &c. is spread over Asonesia from Nias to Polynesia, (e. g. *atula*, *atlu*, *tian*, *tatonu*, *betul* &c.) It is connected with the Tibeto-Himalayan *thang*, *tong*, *tondo*, *thuna*, *Naga ateng*, *Anam thang*. The Dravirian *nere*, *neranu* is probably also the original of the Indonesian *no-ber*, *bur-as*, *muru*, &c., Poly. *perere*.

Unlike the Gangetic and Ultraindian vocabularies, the Dravirian have little direct connection with Tibetan. The southern dialects do not appear to have any. The course of the Dravirian current has evidently been from N. W. to S. E. along the southern foot of the Himalayas and not across them, and its immediate origin is not to be sought in the Tibetan direction. The following words in the list show Tibetan affinities, which are probably all or nearly all archaic or extra-Indian in origin,—6, 10?, 11, 19, 33, 37, 38, 39?, 41, 44, 46, 51, 57, 59.

Having thus glanced at the eastern affinities of the Dravirian vocabularies we may pursue the enquiry to the N. W. The influence exerted by the intrusive Sanskrit is the first to be considered.

The vocabularies of the existing Northern languages of India,—Konkani and Marathi, Guzarati, Hindi in its various dialects, Kashmiri, Bengali and Uriä—are Sanskritic. A small proportion of the words, estimated at an eighth to a tenth, are non-Sanskritic,

Crooked.

The Dravirian *koniya*, *konal*, *konalu*, is Arian (*kona* &c.) Another term which has also Arian affinities but appears to be pre-Aryan is *wangkara* Telug., *banka* Bengali, *hengko* Uraon, *beko* Newar, *banro* Sunwar. The root is probably *wang*, *heng* &c. as it occurs in the Telugu *wompa*. Malayalam *valanga*, *Tadava mont*, Chinese *wan*. Polynesian *wama*, Australian *balbal*, *wali* &c., Nias *abela*, Bawian *belo*, Bisayan *bali-ku* &c. Malayu *belo* (*mek*), Timor *peno* &c. But, as in numerous other instances, the Dravirian postfix has been imported into Indonesia as a substantive part of the word. The Uraon *hengko* is identical with the prevalent Indonesian *hengko*, and the Newar *beko* correspond closely with the Celebesian *peko* and Polynesian *biko*.

Round.

The Dravirian *urundu*, *urutu*, &c. is a common Arian &c. root, but it is probably pre-Arian India. Tib. *lumpo*, *ri*, Burm. *lung*, *long*, Koria *lung-kur*, Indonesian *limbung*. The Himalayan *burbur*, and Male *bavo*, Kiranti *ambo*, are Asonesian, *bubu* Ende, *poepoe* Polynesian, *abela* Nias, *butut* Indonesian, *but bul*, *bur* &c. is also Indo-european, African &c. The Gond *moto* may be Arian, but it has a strong resemblance to the E. African (*Makna*) and Polynesian *poto*.

Few, Small.

These words belong to a class which is nearly as persistent as the definitives and directives, and which is open to the same objections when used in ethnic comparisons. Some of the Indonesian affinities however are so striking that I will give them. Bengali *kinchit*, Bodo *kitisi*, *tisi* "few" Naga *tesu*, Burm. *tiehe*, Karmataka *tasa*, to Dhimal *atoisa*, &c; Turkish *kiteli*, Singh *katsi*; Malay *kinchi*, *katchu*, ("small"); Tibbetkad *zigit* "few", Gurung *chigide*, Kiranti *chichit*, Indonesian *sikit*, *sidiit*, *sakide*, *clunch*, *che* &c. Sunwar *iska*, Naga *ishita*, Karea *siko* &c. Indonesian *siku*, *sakui*, *usi*. Most of the other numerous Asonesian terms have also direct continental affinities, Ultraindian, Caucasian, N. and E. Asian, African or Iranian.

and amongst these Dravirian roots are found.* Most of these are probably remnants of the Dravirian basis of the North Indian languages, like the structural traits and some of the particles noticed in Section 7.

The influence of Sanskrit on the southern languages has been much smaller, but it is nevertheless considerable. On this subject Mr Campbell has remarked: "The third class of words which is generally mentioned by Dr Carey as "derived from the Sangskrita," I have named *Sanscrit corruptions*; it consists of words which have passed into Teloo goo, either directly from the Sanscrit, or through the medium of some of its corrupted dialects, such as the Praerit, and which, in order to be assimilated to the *language of the land*, have undergone radical alterations, by the elision, insertion, addition, or subtraction of letters. These changes have been sometimes carried so far, that it is difficult to trace any connexion between the adulterated word and its original in Sanscrit." "The reader will find all words denoting the different parts of the human frame, the various sorts of food or utensils in common use among the natives, the several parts of their dress, the compartments of their dwellings, the degrees of affinity and consanguinity peculiar to them, in short all terms expressive of primitive ideas or of things necessarily named in the earlier stages of society, to belong to the pure Teloo goo or *language of the land*. It is true, (so mixed have the two languages now become) that *Sanscrit derivatives or corruptions* may, without impropriety, be occasionally used to denote some of these. This, however, is not common; the great body of Sanscrit words admitted into the language consists of abstract terms, and of words connected with science, religion, or law, as is the case, in a great degree, with the Greek and Latin words incorporated with our own tongue: but even such Sanscrit words as are thus introduced into Teloo goo are not allowed to retain their original forms, they undergo changes, and assume terminations and inflections unknown to the Sanscrit; and, except as foreign quotations, are never admitted into Teloo goo

* Dr Stevenson is still investigating this subject. Since the earlier chapters of this paper were published two portions of a comparative vocabulary of non-Sanskrit words in the Indian vernaculars have appeared in the *Journal of the Bombay Asiatic Society*, vol. iv p. 117, 319 (1852-53), and to these I may refer my readers for examples of vocabularies common to the purer and to the Sanskritised languages of India.

until they appear in the dress peculiar to the *language of the land*." (Introduction to Telugu Gram. p. p. xix, xx.)

Mr Ellis, in his note to Mr Campbell's Preface, has the following observations on this subject. "In the preceding extracts, the author, supported by due authority, teaches, that, rejecting direct and indirect derivatives from the Sanscrit, and words borrowed from foreign languages, what remains is the *pure native language of the land*: this constitutes the great body of the tongue and is capable of expressing every mental and bodily operation, every possible relation and existent thing; for, with the exception of some religious and technical terms, no word of Sanscrit derivation is *necessary* to the Telugu. This pure native language of the land, allowing for dialectic differences and variations of termination, is with the Telugu, common to the Tamil, Cannadi, and the other dialects of southern India: this may be demonstrated by comparing the Desyam terms contained in the list taken by Vencaya from the Appacaviyam, with the terms expressive of the same ideas in Tamil and Cannadi. It has been already shewn that the radicals of these languages, *mutatis mutandis*, are the same, and this comparison will shew that the native terms in general use in each, also, correspond."—(p. 18). "From the preceding extracts and remarks on the composition of the Telugu language, as respects terms, it results that the language may be divided into four branches, of which the following is the natural order. Desyam or Atsu-Telugu *pure terms*, constituting the basis of this language and, generally, also, of the other dialects of southern India: Anyadesyam *terms borrowed from other countries*, chiefly of the same derivation as the preceding: Tatsamam, *pure Sanscrit terms*, the Telugu affixes being substituted for those of the original language: Tadbhavam, *Sanscrit derivatives*, received into the Telugu, direct, or through one of the six Prácrits, and in all instances more or less corrupted. The Grámyam (literally "the *rustic dialect*," from Gráman Sans. a village) is not a constituent portion of the language, but is formed from the Atsu-Telugu by contraction, or by some permutation of the letters not authorised by the rules of Grammar. The proportion of Atsu-Telugu terms to those derived from every other source is *one-half*; of Anya-desyam terms *one-tenth*; of Tatsamam terms in general use *three-twentieths*; and of Tadbhavam terms *one quarter*.

"With little variation, the composition of the Tamil and Cannadi are the same as the Telugu, and the same distinctions, consequently, are made by their grammatical writers. The Telugu and Cannadi both admit of a freer adoption of Tatsamam terms than the Tamil; in the two former, in fact, the discretion of the writer is the only limit of their use; in the high dialect of the latter those only can be used, which have been admitted into the dictionaries by which the language has long been fixed, or for which classical authority can be adduced; in the low dialect the use of them is more general—by the Brahmans they are profusely employed, more sparingly by the Sudra tribes. The Cannadi has a greater and the Tamil a less proportion of Tadbhavam terms than the other dialects; but in the latter all Sanskrit words are liable to greater variation than is produced by the mere difference of termination, for, as the alphabet of this language rejects all aspirates, expresses the first and third consonant of each regular series by the same character, and admits of no other combination of consonants than the duplication of mutes or the junction of a nasal and a mute, it is obviously incapable of expressing correctly any but the simplest terms of the Sanskrit; all such, however, in this tongue are accounted Tatsamam when the alteration is regular and produced only by the deficiencies of the alphabet.

"But, though the derivation and general terms may be the same in cognate dialects, a difference in idiom may exist so great, that, in the acquisition of one, no assistance in this respect can be derived from a knowledge of the other. As regards the dialects of southern India this is by no means the case,—in collocation of words, in syntactical government, in phrase, and, indeed, in all that is comprehended under the term idiom, they are, not similar only but the same." (p. p. 21, 22).

Mr Elliot has also more recently remarked on the aptitude of the South Dravirians to substitute Prakritic words for aboriginal ones. (Journ. As. Soc. of Beng. vol. 18, p. 350). *

* The form of the Sanskrit words is much purer in the Dravirian than in the Sanskritoid languages themselves, and the reason is well explained by Dr Stevenson in one of his recent papers. "In reference to the San-krit portion of the vernacular languages of India it is a singular fact that it is purer among the inhabitants of Malabar and Mysore than among those of Bengal and Upper India. The reason of this can easily be given, though it be not at first obvious. In Upper India, Bengal and Gujaraht, nine-tenths of the language is a corrupted Sanskrit. The

In the short list of familiar words contained in the appended comparative vocabulary, several examples occur of Sanskrit or Arian terms which have gained equal currency with native ones or replaced them. Parallel phenomena are found in all vocabularies and are very prominent in those of nations which have had much intercourse with others superiour to them in civilization, or politically paramount. Sanskrit has been received into the glossaries and literature of Southern India as freely as it was into those of the civilised western nations of Indonesia, or as Chinese has been into those of Korea and Japan.*

The Dravido-Australian languages have a connection with the Sanskritic which belongs to a much more ancient period of their history than that which followed the entrance of the Arians into India. This archaic connection is probably itself susceptible of reference to more than one era and condition of the Dravido-Australian formation. The glossarial affinities between Australian and Sanskrit† must belong to the earliest stage of the relationship between the two formations, because the former represents the most primitive and least modified form of Dravidian. The Australian form is archaic even when compared with Dravidian, and it is still more archaic when compared with Sanskrit. The glossarial affinities may be considered as carrying back the history of the Indo-European formation to its proto-Scythic condition. The archaic affinities of the Bengali-Marathi and proper Dravidian vocabularies with those of Sanskrit and other Indo-European

Brahmans and higher classes there more easily fall into the prevailing pronunciation of Sanskrit words, whereas in the South, the Sanskrit vocabularies, being rarely used by any except Brahman or well educated persons, the primitive forms though with the notable exception of the dropping of the proper marks of the genders of nouns, have been most carefully preserved." (Journ. Bombay As. Soc. vol. iv p. 121). The Sanskrit vocabularies that have been adopted into Indonesian languages have a similar comparative purity.

* Dr Prichard appears to have adhered to Klaproth's belief that there is a class of words of the first necessity which are preserved long after other kinds of words are replaced, and thus form one of the tests of linguistic affiliation. W. Von Humboldt has more accurately remarked, "It is generally believed that the affinity of two languages is undeniably proved if words that are applied to objects which must have been known to the natives ever since their existence, exhibit a degree of resemblance, and to a certain extent this is correct. But, notwithstanding this, such a method of judging of the affinity of languages seems to me by no means infallible. It often happens, that even the objects of our earliest perceptions or of the first necessity, are represented by words taken from foreign languages, and which belong to a different class."

† Some examples of this will be found in the appended vocabulary. Others will be given in the section on Australian.

languages having the same roots, probably belong in part to much later periods, and while some are doubtless of Arian origin in the trans-Indus ages of that formation, others, it is reasonable to conceive, must be of Dravirian origin. If, as appears to result from ethnic evidence of all kinds, the Dravirian formation preceded the Indo-European in eastern Irania, it is very improbable that no native terms were adopted by the intrusive Arian vocabularies. It is equally improbable that in Northern India, where the ancient formation has never been wholly eliminated, Sanskrit did not receive other additions from the vocabularies of the subject and partially helotised tribes.*

When we compare the various forms of roots common to the eastern Indo-European languages—those of Irania and India—with the Dravido-Asonesian, we frequently find that several of the archaic insular forms, Australian, remote Papuanesian &c., are identical with Irano-Indian forms. It is sometimes erroneously assumed that roots common to Sanskrit and Zend with the spoken Medo-Persian and Indian languages are necessarily original in the former and derivative in the latter, and that all the variations from the Sanskrit or Zend forms are corruptions of them. There is no reason to believe that in archaic times one Indo-European nation, speaking one dialect, was ever so civilised, populous and powerful as to occupy all Irania. The Sanskrit-speaking tribe, when it first comes into the dawning light of history, is found restricted to a petty district in N. W. India, and it never succeeded in imposing one dialect even on the basin of the Ganges. The present vocabularies prove that dialects preserving Dravirian ingredients of different kinds have always existed in this province. The living vocabularies of Irania afford similar evidence, for they possess roots that are not Sanskrit or Zend, in common with Indian and Asonesian languages, and varieties of Sanskrit roots which have an equally wide dissemination. A large proportion of these vocables probably existed in different Iranian dialects not only contemporaneously with Sanskrit

* See the remarks on this subject in the Introductory Chap. of this Part (*ante* vol. vi. p. p. 686-8). Dr Stevenson, in a paper which had not reached me when these remarks were written, has alluded to the additions which Sanskrit may more recently—that is since it ceased to be a spoken language—have received from native words introduced into the language by provincial writers, and then adopted by lexicographers. Journ. Bombay As. Soc. vol. iv. p. 119.

and Zend during the period of their predominance, but throughout the earlier ages of the formation. Those that are most widely dispersed in the Irano-Indian and Dravido-Australian languages, and those that are found not only in Australian and other archaic Aæonesian vocabularies but in Caucasian, Ugrian, western Indo-European and African, render it certain that, even in the crude proto-Arian stage of the Indo-European formation, various dialects existed. In this stage the formation approximated to the Dravido-Australian in its general character, and when it is found that dialectic varieties of a common root are also common to existing Irano-Indian and Dravido-Australian vocabularies, it results that there was a period when the external limits of the two formations were not so far sundered as Ireland and Australia, and when the line of mutual contact was further west than the basin of the Ganges. The dialectic varieties were produced not only before the Iranian formation began to spread to the shores of the German Ocean but before the Dravirian began to move eastward on its route to the Indo-Pacific islands. If they belong to the earliest dialects of the Dravirian formation, they must have existed before the Iranian formation took its distinctive shape. It is probable that they belong to the proto-Seythie basis of both formations. They establish an early and close connection between them, and render it probable that they were at one time contemporaneous in Irania.

The further our comparative glossology advances the more minute and accurate will be our classification of the root varieties common to the two families. But until the vocabularies have been carefully compared not only with each other but with those of all the other families of language, their full historical import will remain concealed. While many of the common Irano-Dravirian roots may, by the structure of the vocables in which they occur or by their distribution, be referred to Ugrian or other families, and some to more modern sources, others appear to be entirely pre-Seythie, in other words they are older than the Dravirian and Iranian formations, and older than the Seythie or proto-Seythie formational basis itself. The form of the pure root in such instances is referable to a monosyllabic condition of the family, not only because it is free from any adventitious characters derived

from the phonetic and structural habits of other harmonic families, but because it is extant in these or in the monosyllabic family in a similar form, although in the former it may be concentered with a definitive. The investigation of the proper glossarial history of the *formation* as such, commences with the separation of this basis portion of the vocabulary from that which has been since acquired. In the Dravirian formation this appears to be less difficult than in the Indo-European. Its basis is closer to the monosyllabic stage. The basis of the latter is Scythic to a large extent.

The other foreign Asiatic affinities of the Dravirian vocabularies must in general be either of similar origin to the common Sanskritie, that is, derived from languages that intruded into India from Irania prior to the Sanskrit era, or they must belong to the pre-Indian era of the Draviro-Australian formation, and have accompanied it in its first advance across the Indus. This does not exclude the derivation of a certain portion from visitors by sea, and from any alien northern and eastern tribes that may have bordered the Dravirian province before the Tibeto-UltraIndians crossed the mountains. There is no evidence of the existence of such tribes, or of the Dravirian having been preceded in India by any other formation from which words having extra-Indian affinities could have been borrowed.

The affinities of the vocabularies are much more numerous with other foreign languages than with the Tibeto-UltraIndian. They are very various, and those with remote languages—as the Caucasian and North Asiatic—are so abundant and direct, that they afford similar evidence of the long independence and the archaic position of the mother-formation to that which we have found in an examination of the more generic words and particles.

From the time that diffusive nations of higher civilization than the original Indo-Australian existed to the west of the Indus, a flow of foreign words into the Indian vocabularies similar to the comparatively recent Arian current, must have been going on, age after age, and millenium after millenium. Each foreign, mixed or native tribe that spread such words by its migrations and conquests, would become the cause of further movements and diffusions. The Dravirian terms relating to arts and usages appertaining to a higher civilisation than that of the Australians, Sîmangs

and Andaman islanders, if compared with those of the other languages of the Old World, will probably enable us to ascertain with what races the Indians were most intimately connected prior to the intrusion of the Arians. So far as I have hitherto been able to carry such a comparison, the result is strongly in favour of a great influence having been exerted on the vocabularies of India during pre-Brahminic ages, by Iranian, Semitic, Caucasian and Scythic nations, or by nations of one or more of these races whose vocabularies had borrowed from those of the other races. It is not intended to assert that a Semitic or even a Scythic formation prevailed over Irania as far as the Indus, prior to the Indo-European. That must depend on other than merely glossarial consideration. Whether or not the formation of East Irania remained Dravirian, more or less modified by Scythic influence, until it was displaced by Arian, does not affect the conclusion that, from this province, words of a more western and northern derivation, were transmitted by its tribes to India, during the great interval between the Australian and the Arian epochs. There is no ground to believe that the Caucasian tribes were ever themselves nomadic and diffusive—although other tribes of the same family were—or that purely Semitic tribes speaking purely Semitic languages were ever durably established as far to the eastward as the Indus. The more important modifications which the Dravirian formation has undergone since the Australian era are not of a Caucasian or Semitic character, but of a Scythic and Scythico-Iranian. Whatever changes the vocabularies of eastern Irania underwent, and however much its tribes were modified physically and in civilisation, the linguistic basis would appear to have remained faithful to the Scythico-Dravirian type. The probability therefore is that the Dravirian vocabularies derived those Western and Asiatic terms of art and civilisation, which are posterior in origin to the Australian era, mainly from Scythic, Scythico-Iranian and Iranian tribes, that successively dominated in the basin of the Indus. This is far from excluding Semitic influence, direct or transmitted, for most of the eastern branches of the Iranian race, particularly the tribes near the Indus as the Afghans and Beluchis, are physically highly Semitoid.

The first class of N. W. vocabularies after the Sanskritic, with

which the Dravirian fall to be compared, are the remaining Indo-European, and particularly the various Medo-Persian. Hitherto the glossarial study of the Indo-European family has been chiefly directed to the vocables and roots common to Sanskrit with the other languages of the formation, so that materials are not yet prepared for an ethnic comparison of the Indo-European roots in the mass with those of other formations. As necessarily happens in an ancient, very widely extended, and much divided family, the roots of any one language, such as the extreme eastern—Sanskrit—form but a small portion of the variety now possessed by the family as a whole. Besides the more modern acquisitions of each vocabulary, there can be no doubt that, as a general rule admitting of exceptions, each large group received most of its peculiar roots from the prior languages of the province in which it prevails, or of those provinces through which the tribes which established it advanced from the original Indo-European seat to the lands where they were found at the dawn of history, and that the radical differences in the glossaries are, in great measure, to be so accounted for. Thus while the Arians, moving eastward into the Dravirian province, would have their vocabularies more or less Dravirianised, the ancient Medo-Persian tribes moving on the Caucasian and Semitic provinces, would have their vocabularies affected by those of the native tribes amongst whom they penetrated. Those hordes which passed through the variable Scythic region or continued to occupy portions of it, would, in many cases, receive fresh accessions of Scythic words. Those which moved north westward would probably receive Fino-Ugrian accessions, while those which went westward through Asia Minor would, for a time, be subjected to influences similar to those which have for a longer period operated on the Medo-Persian. In Europe the pioneer migratory tribes must have come in contact not only with Scythic in the north, but with Euskarian, and probably other Scythico-Libyan languages, in the south. Hence probably it is that the glossarial divergency of the Celtic, the Skipetarian, the Russian, the Armenian and the Sanskrit, is greater than that which divides many languages of entirely distinct formations.

The ethnology of S. W. Asia cannot be well understood until the vocabularies of all the races who occupy it have been carefully compared. A comprehensive comparison of this kind must

precede the attempt to trace the history of any one of these formations, and no satisfactory progress can be made in the elucidation of the archaic position and movements of the Dravirian until more light is thrown on those of the Indo-European and Scythic in particular.

The Dravirian vocabularies have some special affinities with the most eastern of the Medo-Persian, those of Afghanistan and Beluchistan. This part of Irania has received new Scythic vocables subsequent to the Arian era, and some of these may have been archaically common to Scythic and Dravirian. But the special affinities in question must be remnants of the pre-Arian era, and thus stand on a similar footing with the Dravirian roots in the Sanskritoid languages of northern India. These affinities are not confined to Brahui. I have observed several in the Pashtu and other published vocabularies which I have partially examined. These vocabularies also have this in common with Dravirian, that they possess non-Sanskrit roots and forms of roots having clear affinities with Semitic, Caucasian and Scythic radicals. While some of the Medo-Persian affinities are exclusively with the proper Dravirian vocabularies, a much larger number include also the Guzarati-Bengali class.*

These non-Sanskritic roots, and non-Sanskritic varieties of roots that are Sanskrit, common to vocabularies on the western side of the Indus with the ancient Dravirian glossaries, afford some evidence of a period when Eastern Irania was not yet Arianised, and of a connection which then existed between its languages and those of India. It does not necessarily follow that the immediately pre-Arian formation of this province was Dravirian, for even if it was not, it might have had a glossarial connection with it. But as no traces have been remarked of a distinct formation, and as several of the vocables are Dravirian in structure as well as in root, the presumption is that the affinity indicates the former prevalence of the Dravirian formation to the west of the Indus, and this presumption becomes certainty when the affinities of Dravirian with still more western languages are considered. It is quite possible that before the Sanskrit language itself was carried

* Examples may be found in the annexed vocabulary under the terms Air, Ant, Arrow, Bird, Blood, Boat, Bone?, Buffaloe, Cat, Dog, Ear, Eye, Fire?, Foot, Horse, Stone &c.

into India, other Arian dialects or Dravido-Arian dialects may have existed in the province, and the Scythic element cannot be excluded from the East Iranian languages of any period. But however this may be, we are ultimately carried back to a Dravirian era in the linguistic history of eastern Irania, and it is the oldest that we can recognize.

By far the most numerous glossarial affinities of the Dravirian languages are with a great chain of vocabularies that appears at one period to have extended from the Caucasus to Kamshatka, embracing different formations, although it is probable that this wide dispersion of the same roots was chiefly the work of a race to which one only of these formations was native. The affinities in question embrace Caucasian, Ugrian and Ugro-Tatar, Yeniseian, and, in a less degree, Koriak and other extreme N. E. Asian vocabularies. The Ugrian are the most important, but a considerable proportion are exclusively Caucasian, and a smaller proportion exclusively Yeniseian. The larger portion of these roots appears to belong to the pre-Indian era of the Dravido-Australian formation, and to form an integral part of its glossarial basis. The Caucasian basis is Yeniseian, N. E. Asian and proto-Scythic more than proper Scythic, and the Semitico-Libyan formation is not remotely allied to it by several phonetic and ideologic traits, as well as by roots. The Dravido-Australian formation partly enters into the same circle by some of its ideologic traits, and as the Semitico-Libyan type preceded the proper Scythic in the S. W. province of the Old World, and Dravido-Australian is the earliest of the more Scythoid formations in this part of the continent, it is probable that some of the Caucasian affinities are direct. The more fundamental Ugrian roots, with the Yeniseian and N. E. Asian, render it probable that they were brought by the primary Dravirian-speaking tribes from central Asia. Some are doubtless of later derivation, but the greater portion must be considered as of equal antiquity with those phonetic and ideologic characters which affiliate Dravido-Australian and Ugrian. The more remote N. E. Asian affinities, when not Scythic also, may be still older, for similar affinities are found in the Caucasian, Semitico-Libyan and Zimbrian languages. They may appertain to the non-Scythic southern element of the formation, or to its partially cognate proto-

Seythie or pre-Seythie condition, when it was still located in eastern or central Asia. In the latter case they would rank with the pronouns.

While the roots are largely allied to the Seythie, and especially to the more western and central languages—Ugrian, Samoiède—they are not in general derivatives from Seythie. The structure of the vocables is proper to the Draviro-Australian system, and the forms of the roots are frequently such as are found in other ancient families of language. In general they are to be considered as equally archaic in the Dravirian and Ugrian families, and most of them appear to have been current in the monosyllabic condition of the Dravirian mother tongue. Many vocables proper to a considerably advanced civilization are of this class, and we must conclude that the Dravirian-speaking race which advanced into Irania from the north east and spread over India, was one of the oldest civilised peoples of Asia, and that this family of language was probably the first of the proper Seythico-Iranian stock to become dominant on the shores of the Indian Ocean. To the same great movement from the interior of the continent on the south western lands a portion of the Seythico-Dravirian vocables found so abundantly in the Caucasian and Semitico-African languages is probably to be ascribed. The Asonesian vocabularies contain numerous Seythie, and especially Ugro-Samoidie, roots and varieties of roots that are not now Dravirian, but a large proportion of these appear to belong to the Draviro-Australian era and to be referable to the same long continued movement. In the next chapter we shall find that it also affected the Tibetan languages, western and eastern,—through them, in later ages, the Ultraindian and Gangetic,—and, still later, the Malayu-Polynesian through the Ultraindo-Gangetic. Hence of two Ugrian forms of the same root found in Asonesian vocabularies, it becomes possible to trace one to the primary Draviro-Australian immigrations, and the other to the Gangetico-Ultraindian that immediately preceded the Arian era of India.

The preceding inferences will be best illustrated by taking a few terms from different classes and examining the affinities of the prevalent Dravirian roots.

Names of parts of the body.

In comparing the names of the different parts of the body in any group of languages, we find that the same root has received various applications. The same vocable in different languages or dialects signifies Head, Hair, Skull, Face, Cheek and Eye. We find also that the same vocable has been applied to the more prominent portions of the person, as the Nose, Lips, Mouth, Teeth, Ears, Arms, Hands and Fingers, Legs, Feet and Toes. We find also that the same word has been applied to the Head and to portions of it, as the Nose, Mouth, &c. and hence the former class of names runs into the latter, and the same term has come to signify every one of the objects we have named. We also find more limited classes, founded on more specific analogies. Thus words for the Lips, Mouth, Tongue and Teeth are often specially connected. It is probable that one name originally signified the Mouth and all its parts, and that this name afterwards became restricted to the Mouth in one dialect, to the Lips in a second, to the Teeth in a third and to the Tongue in a fourth. The Lips and the rows of Teeth might receive the same radical name. The number and regular arrangement of the Teeth appears to have early suggested a connection between them and the Fingers and Toes. Hence the same root has been applied to the Teeth (and secondarily to the Mouth and Lips), to the Fingers (and secondarily to the Hands and Arms) and to the Toes (and secondarily to the Feet and Legs). Similar specific resemblances,—as between the lateral and double appendages of Ears, Hands and Feet, and the most close of all that between the two Arms, Hands and Fingers and the two Legs, Feet and Toes,—have given rise to specific glossarial applications. The Eye being the most striking and important feature in the Head the same root was transferred from Eye to Head and *vice versa*. Glossarial change and concretion has been attended in all families by similar phenomena. Every vocable in the progress of a nation and of its language receives several secondary or conventional applications, some larger and some narrower than the original or etymological one, and some only connected with it metaphorically. Hence a single root, whatever its original meaning, comes to be applied to numerous analogous objects. Distinctions are primarily indicated by the addition of segregative and qualitative words or by

double words. But when an object has acquired ideal individuality its name tends to become a specific conventional one. Its etymological meaning becomes first obscure and then disappears. Hence any change in the name, however induced, has the effect of giving it a conventional individuality, and of obliterating the sense of the ancient connection with other applications of the same root. For example, if the Hair, Face, Mouth and Nose were originally designated by the single root for Head, the distinctions being indicated by variations in the accessory definitives or qualitatives, these compounds might concrete into words the connection of which was no longer felt, and in the gradual phonetic change to which vocables are liable the root itself in each of its applications might acquire peculiarities of form. By the dropping of the definitives or qualitatives the bare root might come to be used as a distinct word in each of its acquired forms. The most common cause of the limitation of a root or of particular forms of a root to one of several meanings, or to one part of the object it originally described, has been the acquisition of distinct names for some of the other meanings or parts, either in the internal progress of the dialect or from the influence of another dialect or language. The separation of languages into several dialects has been the chief cause of the multiplication of specific conventional applications of the same root, and the mutual influence of these dialects appears to have been the principal reason why we find in a single vocabulary the same root current in different forms and with a different meaning for each.

The glossarial variation and complexity are greatly heightened by the circumstance of the same object having often received several names. The progress of language would tend to give to each a limited conventional application. One of the words for Head might be restricted to Head, a second to Hair, a third to Skull, a fourth to Face, a fifth to Eye &c. Each of the dialects formed before this change began might appropriate a different name to several of these objects, so that the same word might signify Head in one, Skull in a second, Face in a third and so on. As the roots would frequently undergo phonetic changes, subsequent intercourse between the tribes speaking these dialects might lead to a vocabulary which had retained one of the ancient roots with a particular

meaning, receiving the same root in other forms and with different meanings from the cognate vocabularies. Another cause of the same root being found with different applications is that some words were used generically. Thus when the Ears and the Hands were designated by the same root the former might have a word for Head annexed to it. The latter might in time acquire a phonetic form that distinguished this application from the primary one, and the dropping of the other term of the compound might leave the same root current for both Head and Ear, the phonetic variation being sufficient to give to each a complete conventional independence.

The acquisition of new roots from foreign vocabularies and of new forms of native roots from sister dialects not only leads to restrictions in the applications of the old roots but to secondary and even metaphorical meanings becoming the principal ones. Thus a word that at one time means Hair generally becomes restricted to the hair of the head or particular parts of it, of the face or parts of it, as Whiskers, Mustaches &c., or to that of the rest of the person, or distinctively to that of the lower animals, or to one kind of hair, as down, wool, bristles, &c. A word that was originally applied to feathers, hair, grass and other things of a similar growth or appearance may be appropriated to one of them, so that in different dialects and languages the same root may signify Feathers, Hair, Wool, Fur, Down, Moss, Grass, Bur, Bambus, Thorns, Teeth &c. It may also be applied in different languages qualitatively to distinguish particular things or animals, and thus eventually furnish many substantive names, most of which will in time come to be purely conventional. A word for Face or Eye may become Appearance, Look, See, Glance, Watch, Beware, Guard, Show, View &c., while the brightness, sharpness or roundness of the Eye, a convex in a concave, may give rise to numerous metaphorical applications any of which may acquire the rank of a substantive term when the word becomes obsolete in its original meaning. Thus the point or the edge of an instrument, the sun, a gem, a concavity, a hole, a ring, a convexity, an ankle, a knuckle, the navel, a nipple, a bud, a knot, a spring, the source or origin &c may in different languages be designated by a root which originally meant the Eye. We can thus see that a very few primary

sounds may have served not only as the phonetic but as the glossarial foundation and material of all language. A root for Head may have not only become restricted to parts of the head, thence to other parts of the body and thence to objects and ideas named from an actual or fancied resemblance to any of these parts, but may have been transferred to Skull, to Bone, to particular bones, to things round, cavernous, hard, protuberant, to the top of anything or of particular things, to masters, chiefs, governors, rulers &c. No roots have been more prolific, and there is hardly any limit to their ramifications. A single instance will suffice to show how roots that have become obsolete or been displaced in their primary or older meanings are preserved in their secondary ones. In Malay Head is *kapala*, a comparatively recent acquisition from Sanskrit. But the native or earlier root, *ulu*, still current in many of the cognate Indonesian languages, is found in Malay with several meanings. Unaccompanied by any other word, it signifies "inland" and "interior." The history of this word is clear. From the Head, it was applied to the highest part of a stream, and as streams are the Malay highways to the interior and the cultivated and inhabited tracts are in general limited to their borders, the *ulu sungu*, the head or upper part of the stream, was synonymous with the interior of the country or district. When *ulu* was by degrees supplanted by *kapala* in its principal meaning, it came to signify the interior even without the addition of the distinctive word for stream. Another of its secondary applications is to the hilt or handle of a weapon or instrument, the blade being termed the *cye, mata*, a root which, in other languages, also signifies Eye, Face, Head &c.

What is found on comparing the vocabularies of any single family, is found also on comparing those of all the known families of language. The same terms recur in them and it soon becomes evident that in their primary roots and vocables, they are all intimately related, and are in fact ultimately dialects of one language. The glossarial resemblance is so close and unequivocal, and the transfer of roots from one part of the body to another is so universal a phenomenon, that we arrive at the conclusion that this fundamental portion of the vocabulary was formed, to a greater or less extent, when the different families of language had not separated far from each other. This remarkable connection has

doubtless been brought about in particular cases through the mutual influence of vocabularies that have been brought in contact by ethnic movements, although originally widely separated from each other. But the connection is too intimate and too universal to admit of such an explanation as a general one. It is more probable that the comparatively barbarous and outlying tribes of the world, as the Hottentots and the Australians, carried their cognate Asiatic basis vocabulary from a primitive seat in the vicinity of the parent Asiatic tribes to their present locations, than that it was brought to them there by alien tribes that spread from an Asiatic centre to the extremities of Africa and Asonesia after these were inhabited. We may indeed imagine a succession of such all-embracing movements, but the source of the common vocables must ultimately be found in one centre, and there is a considerable and fundamental class which appears to be equally archaic in all the families and must be referred to the earliest ethnic movements. Whether there were originally one or several languages, it is evident that the mother tongues of all that are now preserved existed at one period as closely connected and mutually influenced dialects, and this condition of things could only have arisen from the tribes who spoke them occupying a very circumscribed portion of the habitable world. We can clearly trace the influence of several dominant and widely diffused vocabularies, but after allowing for the common vocables thus disseminated in various directions, there is a large residuum of identical roots, forms of roots, duplicated and compound roots, and compounds of definitives and roots; the presence of which in all the outlying languages of the Old World can only be explained by each having inherited them as a portion of the primary vocabulary which its mother tongue brought from some ethnically central region.

It does not seem possible to go beyond this conclusion. Whether the earliest central languages were of independent or of common origin cannot be determined, because while proximity and mutual contact would result in an interchange and community of roots between originally different languages, a single language when isolated would separate into different dialects which would ultimately vary as much in their applications of the common

roots, as an alliance of assimilated vocabularies. In dialects of common descent the proportion of words that preserve their identity in root and meaning gradually decreases, while the proportion of those roots that have acquired a peculiar conventional meaning gradually increases. But in the life of languages a root that has wholly lost its primary signification and gained a different one, is equivalent to a new word. Hence in cognate dialects that are separated, alien vocabularies are constantly growing up, and they may at last come to be as distinct from each other as it is possible for human tongues to be. So that whether speech began with one language or with many, the kind and degree of divergence and resemblance between all the vocabularies of the world would, in the lapse of time, be the same. It is probable that all existing vocabularies are etymologically identical, and even that they have all been woven from a few primitive roots designating the most familiar objects, qualities and sensations, but it is true at the same time that the identity of the roots with few exceptions is not a living one even in the same language. It is on the capacity of the same root to receive almost endless changes in meaning and form, and thus to become in reality the progenitor of a succession of new generations of roots, that the growth of language depends. It hence becomes possible for the human mind and tongue to create a language from a few primary cries. These sounds, partly exclamatory and partly imitative, gradually undergo infinite variation and composition, and each modification becomes a new substantive sound or root, in the linguistic progress of the family, the tribe and the circle of tribes.

The following are illustrations from Semitico-Libyan. The sibilant, varying to the dental, is used for *Head* in several Zimbrian languages *kitoa*, *hizoa*, *mutua*, *mtu* &c. and in Fanti *ityil* (pl. *ityie*); for *Eye* in the same family with a different pref. *disu*, *lisu*, *litu* &c. and in Berber *thith*; for *Face* in Kosah with a third pref. *abusu*; for *Hair* in simple or duplicated forms and with the labial final in Gara *shof*, Mahrah *shob*, Saumali *temo*, Bishari *famo*, Agau *sifa*, *sisifa*, *tsabha*, *tseboga*; for *Beard* with similar forms in Zimbrian *dzevu*, *devu*, *debu* &c.; for *Hair* without the labial postf. in several East Zimbrian vocabularies *misisi*, *matiti* &c.; for *Mouth* with the labial final in Arabic *thum*, Hottentot *tub*, Felap *batum*,

Shangalla *suma*, and without the final in Mandingo *du*; for *Tongue* in Bishari *medabo* and Hottentot *tama*; for *Lip* in Seraloli *shume*. The same series is found in words for *Finger* *isba*, *asabi* &c. Semitic, *tyaba* Fanti, *sat* Amharic, *tsat* Agau, and *Foot* *tsab*, *chafu*, *chami*, *chapi* &c. Gafat, *Gonga*, *Agau*. The simple and duplicated root is also *Ear* *ti*, *tu*, *ta*, *du*, &c., *Hand* *id*, *ad*, *tot*, *tata* &c. and *Foot* *ti*, *se*, *sa* &c.

In the corresponding Caucasian series we find for *Head* *dudi*, *ti*, *tehum*, *sab*; for *Eye* *to*; for *Hair* *toma*; for *Mouth* *suma*, *sumun*; for *Tongue* *sibi*, *zahbi*; for *Finger* *titi*; for *Hand* *tota*; and for *Foot* *shape*, *zhape*, *shape*.

In the Scythic series we have besides the simple root the duplicated forms *shosha* Ugrian *Face*; *usu* Mong., *sus*, *ses*, *shosh* &c. Turkish *Hair*; *shus*, *tos* Ugrian *Mouth*; *tish* &c. Turkish *Tooth*; and forms with a labial final *soma* Hung., *shem* Ugrian *Head*; *shun*, *shem* &c. Ugr., *sina*, *saiwa*, &c. Sam. *Eye*; *asim* Turk. *Hair*; *shum* Fin *Mouth*; *tipe*, Sam., *tiwa* Ost. *Tooth*; *ulam*, *oda*, *hute* &c. Sam., *te* Jap. *Hand*.

The Indo-European series has *stoma* Greek *Mouth*; *suban* Pers., *shiba* Afgh. *Tongue*; *sub* Slav. *Tooth*.

The sibilant or dental with a liquid final is *Tooth* in Semitic *sin* &c.; *Ear* in Semitic *zin*, *zan*, *zun*; *Lip* in Fulah, Sereres *tony*, *golon*; and *Ear* in Darf. *tele* and Mandingo *tulu*; *Hand* in Malagasy *tanana*; and *Foot* in Galla *tana*, Woloff *tank*, Saumali *adin* and Bagnon *guidine*.

Caucasian has *air* *Head*, *taalo* *Hand*, *tul-we* *Finger*, *tle* *Foot*, *sila*, *zul-we* &c. *Tooth*, *tzindi* *Nose*.

Indo-European has for *Head* *sir*, *Tooth* *zan*, *dant* &c., *Tongue* *zange* &c.

Scythic has for *Head*, *dil*, *dul* &c., *Tooth* *til*, *del*, *Face* *syn*, *syrai*, *zura* &c., *Eye* *sin*, *sil* &c.; *Ear* *shen*, *shun* Tung., *Hand* *dol*, *tol*, *Finger* *tul*, *tyl*, *dal* &c.

Dravidian has for *Head* *senni*, *tale* &c., for *Hand* *tol*, for *Foot* *adi*, *orri*, *adu-gu*.

In the liquid series we find in Semitico-African for *Head* *alo*, *aur*, *or*, *eri*, *ru*; for *Eye* *ain*, *aire*, *il*, *iri*, &c.; for *Hair* *alu*, *iru*, *riri*, *ili*, &c.; for *Mouth* *lah*, *nua*, *enu*; for *Tooth* *reir*, *bauri*; for *Tongue* *arah*, for *Ear* *ilai*, *iroi*, *ru*, *nea*; for *Finger* *ala*, *nun* &c.; for *Hand* *nan*, *nen*; for *Foot* *noa*.

These simple and double forms correspond with the Caucasian *na, la, ala Face*; *ena, nina, nin Tongue*; *nin, in, lai, lar &c. Ear*; and *rori Foot*;—with the Indo-European *rin Nose*; *ohr, ur Ear*;—with the Ugrian *ol, er, olo, ula, ruh Head*; *nore, namu Face*; *nun, lele, ilet &c. Eye*; *lelu, ein &c. Beard*; *ul, lul, an, nal &c. Mouth*; *urul Lip*; *orr, nyr, any &c. Nose*; *illa Ear*; *al, ol, ola, ili, nala, &c. Hand*; *lyl, lul, ora, ngoi, hga &c. Foot*.

The liquid with a labial final is found in Darfur for *Eye* *nume*; in Zambian for *Mouth* *lumu, romo*; in Galla and Kosah for *Lip* *luf, luf, lebi*; in Malagasy for *Tooth* *nify*; for *Tongue* in Danakil *aruba, Saumali arub, Galla arubai*; Woloff *lamin* and Bagnon *haleb*; for *Eye* in Bagnon *guinif, Sereres nof, Woloff nop, Serakoli ai-ndoso, Hott. z''naum*.

The corresponding series is almost absent in Caucasian, Indo-European and Scythic which prefer liquid finals for liquid roots. Caucasian has *nap, napa Face, nem Tongue, lemba, limba, lumbha Ear*. Scythic has *wa-nim, ny-rim Face*; *namo Mouth*.

The liquid with a sibilant final is *Head* in Semitic *eresh, ras, resh, rus*; *Tongue* in Semitic *lashim, lishin, lisan, halishi* Hausa, *melas* Amh. Tigre, *arat* Galla.

Similar forms occur in Caucasian for *Hair, ras*;—in Indo-European for *Mouth, rot, ort*; and *Nose nas, noss, ris*;—and in Scythic for *Head resz, arsem, nash*; *Face rosa, rozha, oriza*; *Hair yorsi, ersi, nosu &c.*; *Eye anysha, olisa, ilet*.

In Dravidian the principal series are the labial and guttural. The labial forms for *Head mudd, mande*, are North Indian, *mud, mun*, Scythic and African, *mudah* Saumali, *mata* Saum. Galla. Those for *Hair mir, mayir*, are Caucasian. Those for *Mouth vayi, bayi &c.* are Scythic, but with the meanings *Head paya, sei &c. Face pai, Tooth pai*. Those for *Tooth palla, pallu* are Ugrian, *pano &c.*, but the same form is common in Ugrian and Caucasian with other meanings, *Ear &c.* Those for *Nose, muku*, have the Scythic root *pu, bu*, but in Scythic the guttural final is absent. Those for *Finger veral, birlu*, are Caucasian, *palik* (the slender form *ver, bir*, being common with other meanings in Cauc.); Indo-European *perst* Slav.; Scythic *parne, borne* Ugr., *bar-mek* Turk. (the slender form *pil, bel &c.* being used for *Foot, Ear &c.*); and Semitico-African *pirure* Suah., *baram* Woloff, *faratschi* Hausa.

(The forms *bir*, *bar*, *par* occur as the root in words for *Hand*.)

The Kol terms for *Head* and *Hair* *bu*, *ub* &c. are Seythie (*pa*, *hui* &c. Fin. Ugr. *Head*; *up*, *ob* &c. Ugr. Sam. *Hair*); and Libyan *ap* Eg., *amo* Saum. *Head*, *emu* Awekwom, *umbo* Mudjuna *Hair*.

In the guttural series *ku* *Head* is Seythie,—*og* Ugr., *oike* Fin.; *kuzha*, *kuda* *Hair* is Caucasian; *kan* *Eye* is Chinese and Turkish; *kuli* *Tooth* is the Seythie *kul*, *gol*, *kur*, &c. &c. *Head*, *Beard* (*kul-ye* *Yenis.*), *mouth* (*kur. go* Ugr.) *Ear* (*kul*, *gul*, *kor* &c.), *Tongue*, *Hand*,—in the slender form *ker* (also Seythie) it is *Tooth* in Caucasian; *kadu*, *kivi*, *kimi* &c. *Ear* is Seythie, *ku*, *kuma*, *kyrna* &c.; and Indo-European *ugo* Slav.; *kai*, *kayi* *Hand* is Seythie, *kal*, *kasi*, *kesi* &c., *Cauc. kuer* &c. and Libyan *eka*, *kuna* &c.; *kazh*, *kal* *Foot* (the same root) is Seythie, *kasa* *Yenis.*, *kul* *Mong* &c., Caucasian *kash*, *kassi*, &c. and Libyan *kula*, *gar* &c..

In Dravirian the liquid series is only represented by the Tamil *eyiru* *Tooth* (*yir*, *yor*, *Head* Ugr., *yir-si* *Hair* Ugr., *yul* *Mouth* Ugr., *yel-uth* *Ear*, *Kamsch.*); the Telugu *yelu* *Finger*; the Telugu *noru* *Mouth* (a common Seythie form, *nal* *Mouth* Sam., *onnor* *Tongue* *Yukahiri*, *nol* *Nose* Ugr., *nore* *Face* Ugr. &c.); the Kurgi *orana* and Gond *robong* *Hair* (which resemble the African forms with a labial final); and the common term for *Tongue* *naku*. The root *na* is used for *Tongue* both in Seythie and Caucasian languages, but not with the guttural postf. Similar forms occur with other applications, *nago* Ugr., *nyako* Fin. *Face*, *nuyak* *Chukchi* *Hair*, *enku* *Koriak*, *onyok-to*, *nig-sha* *Tungus*. *Nose*; *lege*, *hanka*, *andika* *Audi* *Ear* (comp. the Telugu *nadika*). Semitico-African has *allok* *Tongue* *Felup*, *uluk* *Ear* *Kensy*, *uilge* *Ear* *Tumali*, *Koldagi*, *iluk* *Tooth* *Saumali*, *Galla*.*

The series, as a whole, is Seythie, with a few special affinities to Caucasian.

* Having lately received a copy of Lieutenant Leech's *Brahui* vocabulary I add a more complete list of the names of the parts of the body than I previously had access to. *Head* *katumb*; if *ka* be prefixal (comp. *kalakhi* *cheek*) it is Georgian *tehum* *head*, *toma* *hair*. *Hair* *pish-kou*; *besk* *Misjeian*. *Beard* *rish*; *ras* *Hair* *Lesgian*, *yirsi* &c. Ugr. *Eye* *khan*; *Drav. Face* *mon*; *Hindi* &c., *manle* *head* *Kurgi*. *Lip* *ba*; *Japanese* *ha*. *Nose* *ha-mus*; *Drav. muku*, *Japanese* *fu-na*, *Lesgian* *mushush*. *Tongue* *duvi*; *davo* *Bishari*; *tub*, *thum*, *du*, *mouth*, *Semitico-African*, *davula* *cheek* *Telugu*. *Ear*, *khall*; *Drav. (kavi* *Toda* &c.) *Hand*, *du* (the same root as in *duvi* *tongue*); *tota* *Misjeian*, *tot* *Coptic*, *ula* *Samoiede*. *Foot* *nath*; *Lesgian* *nats* *Finger*. This vocabulary appears to be equally archaic with the Dravirian and Australian, to have the same primitive relation to the Seythie, and to have some specific Caucasian and Caucaso-Libyan affinities.

HEAD, HAIR.

The terms for head and hair being much interchanged in general glössology I place them together.

Eleven vocables are found in the Dravirian languages,—senni, tali, mudī, mir or mayir, kuzh or kud, orama, chuti, ventruka, ku, buho and ub.

Of these, two are of Tibeto-Ultraindian origin. They are confined to the languages bordering on the Ganges. All the others are archaic, and all have Scythic, chiefly Ugrian, affinities. The chain of affinity is various,—Ugrian, Iranian, North Indian, Australian and Asonesian; Ugrian, Caucasian; Yeniseian; Ugrian; Ugrian, Sindhi, Tatar, (Malagasy, Asonesian); Caucasian (Korriak, Sanskrit) &c.

Ku, "head", is found only in Uraon and Male, where it appears to be of comparatively modern Ultraindian derivation, (Naga). The root is Tibetan, Ugrian, &c. The Asonesian varieties, like the N. Dravirian, are Tibetan through Ultraindian.

The Kol term buho, bu, "head", may also be of Tibeto-Ultraindian derivation, but as another variety of the root, used for "hair", is archaic and as the aspirate of buho appears to have been transmitted as a guttural to Asonesia, where the term is very common, there is some doubt as to this. Probably the form buko or buho was an early Draviro-Gangetic variety of the Tibeto-Ultraindian pu, which was carried to the islands by the Gangetico-Polynesian current.

All the other terms are archaic. Mudi "head" is Hindi and Australian on the one side, and Scythic on the other. The full form, slightly modified, remains in the nasalised Gangetic puring (Dhimal). Other varieties are common to Australian, Papuanesian and Malayu-Polynesian languages with Irano-Indian and Ugrian. The root must have prevailed in all these forms in the Iranian province, not only in its Sanskritic but in the older Draviro-Australian and still older proto-Scythic or proto-Dravirian eras. The various Asonesian terms show that the root was the most common in the North Dravirian or Gangetic province. In the south similar forms are only found in Toda and Kurgi, and in Malayalam, the last using this vocable for "hair." The Toda and Kurgi forms appear to be equally archaic with the Australian, which exhibit a si-

milar striking identity with Irano-Indian varieties. The Australian wadi, wari, New Caledonian mari, must, like the other Asonesian forms of the root, belong to the most archaic era of Asonesian glossology, yet the form is the same as the Kashmiri wad (Zend wed). The Peel River bura corresponds with the Bengali mur, Dhimal puring, Todava and Hindavi mud, [so mun Hind., umun Lobo of New Guinea], to which the Malagasy-Polynesian vulu, fulu, bulu "hair" is also allied. The original is the Scythic muri Korea, murit Tung., mui Turk., bui Ugrian. The forms in a are also Scythic,—Ugrian wari, waras, awa &c. The medial u and final i of the Scythic forms is preserved in the Dhimal puring (Korea muri) only, and the i in the North Australian and New Caledonian. The form mud, mun, mande (Hind., Tod., Kurg.) is also current in Samoiede as a term for "beard", mudut, munucha, munda. In Tungusian it is applied to the "mouth" amun. The forms in t, matha, mata, are allied to the Sanskrit mastaka, which appears to be composed of two Scythic roots, mas (comp. mas "hair" Armenian, mast, "hair" Kashmiri, bas, bash, pus &c. "head" Turkish, bus "hair" Fazoglo, iwusa "hair" Fin, usu "hair" Tungus.), and takai ("head" Yeniseian, tuka "hair" Fin &c.)

An allied Tamil and Toda word for hair, mir, mayir, is probably a more archaic form. It is a Caucasian variety, and belongs to a dialect that shows frequent affinities with Dravirian, the Audi. In the Scythic languages the form war is found for "head" and "hair". The slender forms bir, pil, wil, pin are current for "lip," "tooth", "ear" and "foot." In Caucasian ber, were, occurs for "face," "eye," "beard," pil, piri for "mouth," and mir, mer, mar for "nose".

The preceding term is so common along the whole glossarial band of Irania, North India and Asonesia, that it appears to be connected with the Scythic or proto-Scythic movements which gave their special Scythic character to the Draviro-Australian and Indo-European formations. The Tamil and Toda variety probably marks an older Caucaso-Dravirian current, of which this remnant was left in the south of the Indian Peninsula.

The Tamil term for "head," senni, is probably of equal antiquity. It is Ugrian, Celtic, Yeniseian, &c. Another variety of the

same root is Scythic, Indo-European, Semitico-Libyan, &c. The same form is used for "face" in Turkish *syn*, "eye" in Ugrian *sin*, "mouth" in Fin *sun*, and "ear" in Tungus. *shen shun*.

The most common Dravirian term for "head", *tale*—found in Male as the word for "hair"—is also archaic. It is Tatar. Some rare examples also occur in Asonesia. Besides the Tungusian and Mongolian forms for "head", similar forms occur in Scythic with other meanings. In Turkish it signifies "tooth" (*til, tel, del* &c), and it is an archaic and widely spread term for "hand" *udol, ton*, and "finger", *tul, tol, dal* &c. It is found in Dravirian also as a term for "hand" *tol* and in Caucasian as a term for "finger", "hand", "foot", and "eye" *tul-ve, ile, taalo, toli* &c.

A Tamil (anc.), Karnataka (anc.) and Taluva word for "hair" *kuzh, kuul*, is Sanskrit, Caucasian and Koriak. The Dravirian forms resemble the Caucasian most closely. In Scythic it is applied to the "eye" *kus* &c., "mouth" *agus, kuzi*, "nose" *kase*, &c. "ear" *kus*.

Another archaic and comparatively rare term for "hair", *ram, lom, reb, ran, lang* (with different augments) is common to Kurgi, Gond, Bengali, Roti and Wiradurei. The ultimate root *la, ra* &c. has numerous affinities.

The Kol *ub, up*, "hair" appears to be also archaic. It is Ugrian, and an allied form is found in Egyptian. All these forms are ultimately only varieties of the root *bu, pu* &c. already noticed.

The Uraon *chuti* is Sindhi. The root is Ugrian.

Head (a.)

<i>senni</i>	Tamil anc.
<i>sheny</i>	Ugr. (Wolg.)
<i>shem</i>	"
<i>ar-sem</i>	" (Ost.)
<i>soma</i>	" (Hung.)
<i>scr</i>	Ossetic, Pashtu
<i>sar</i>	Pashtu, Hindi
<i>shira</i>	Sansk.
<i>ka-sira</i>	Japan
<i>sheier</i>	Ugrian
<i>shen</i>	Celtic (Erse)
(hair) <i>shaar</i>	Arabic

"	sn	Egyptian
"	shnin	Kasia
"	song	Newar
"	chang	Sunwar
"	sha, ta	Tibet
"	unsa	Mongol
"	asim	Turkish
"	chinyajan	Yeneseian
"	chunajan	"
"	shim	Tobi

The sibilant and aspirate root, in these and various other forms—including the reduplicated *sis*, *sus* &c—is very common both for "head" and "hair" in all the principal formations, Chinese, Scythic, Tibeto-Ultraindian, Iranian, and Semitico-Libyan. The Tamil term appears to be archaic. It resembles the Yeniseian *chin*, Chinese *shin*, and the vowel connects it more immediately with the Ugrian *sem*, and the Ossetic and Pashtu *ser*.

Head (b.)

	talei	Tamil
	tala	Mal., Telug., Gond
	tale	Karn.
	tare	Tulu.
(hair)	tali	Male
	mi talu	Magar
	dil	Tungusian*
	dul	"
	del	"
	deli	"
	tolo-chai	Mongol
	tari-gun	"
	tul-gai	"
	thilu	Rotuma
(hair)	tulah	Meri

The closest to the Dravirian of the Scythic terms is the Mongol *tari*. The Indonesian *tulah*, Rotuma *thilu*, appear to be Tungusian. The root is probably the still more widely spread *ta*, *tha*, *tu*.

* The same root is more frequently applied to TONGUE in Scythic (*til*, *dil*, *tel*, *tul*, *dela*.)

		Head (c.)
	mudd	Todava
(hair)	tala-mudi	Malayalam
	mande	Kurgi
	mud	Hind
	mun	"
	mur	Bengali
	wad	Kashmiri
	wedege	Zend
(hair)	bala	Sanskrit
"	bal	Hind.
"	war	Sindhi
"	wal	Kashm.
"	wed	"
"	madam	Bodo
	puring	Dhimal
	pala	Sirawi
(hair)	mala	Viti
	barram	Mille
	wil	Aru
	umun	Lobo
	balang	Australian (Bathurst)
	walang	" (Kamilarai)
	wari	" (Trusan)
	iwadi	" (Limb. Kar.)
(hair)	mbal, angbal, ji-mara	N. Aust.
"	di-vara	Sydney
	mari	New Caledonia
	balu	" "
	bau	Toro, Vate
	bail	Malikolo
	bura	Peel Riv.
(hair)	wuran	Kamilarai
"	uran	Wiradurei
"	mori	Bathurst
"	morye	Endeavour Riv.
	kabara	Sydney, Liverpool
	kanan	Muruya

[kapala	Sanskrit (Indonesian)*
kobbel	Kamschatkan]
uwari	Ugrian, (Sam.)
awa	" "
pa	" (Fin)
pra	" (Wolg.)
pank	" (Wog.)
panga	"
penke	"
pen	Eusk., Celtic
(hair) waras	Ugrian (Ostiak)
" muri	Korea
merit	Tongus.
bui	Ugr.
(hair) mui	Turk.
emu	Avekwom
muru	Makua
(hair) vulu	Malagasy
" fulu	Pol.
" bulu	Indon. (com.)
matha	Bengali
matho	Sindhi
mata	Galla
matha	Saumali
muda	"
mati	Korea
bash, pash, pus &c†	Turkish
pisha	Tiberkad
bacha	Vanikoro
basa-ine	Malikolo

* In the Australian kabara, kapan, the ka is probably a prefixed definitive and the root bara, pan. In the Sanskrit (and derivative Indonesian) kapala the root may be the Indo-European kap, kop, which appears with a different postfix in cap-ut, hof-d, kuw-ud chaub-it &c. The Latin capillus, villus, pilus "hair" favours the idea that pala is a root in kapala also. The true analysis may be kap-pala, kap-pillus. The labio-liquid root occurs in Slavonic also wcl-is-ok, wlaa, blas &c "hair." Kop, kap appears itself to be one of the Ugrian forms of the guttural root (c). Comp. ugom Ostiak (so coma "hair" Latin). In the Indo-European branch of the Scythico-Iranian alliance the root is generally applied to Eye (oko, og &c.) and the exceptional Latin oculus appears to preserve the postfix of another Ugrian form ugol, oklu.

† Comp. with the meaning Face, facies, face, visage; the Eusk. bisaja, Breton wisaih, Romanic wiss &c; In which the same root occurs.

pathe-na-nadi	E. Tasmania
(forehead) mat	Torres St. (Erub.)
	<i>Head (d.)</i> [See <i>Hair g.</i>]
bu	Kol
buho, bohū	"
phu	Mikir
bong	Singfu
buhu, poko, polu	Indonesian, Polynesian

The root is very common in Asonesia, particularly as applied to "hair." The k of the prevalent Asonesian bok, wok &c, "hair", appears to be referable to the aspirate of the Kol form.

Head (e.)

kuk	Uraon
kupē	Male
go	Tibet, Tungus.
ta-ko	Gyarung, Naga
gok-ti	Takpa
kok	Manipuri D.
kui	"
kho	Karen
koi	Nancowry, Binaua
koik	Torres St. (Masid.) "scull"
guiku	Kowrarega, "forehead"
ku	Balignini

The root is common in Ultraiidian and Asonesian vocabularies.

ka	Australian (Mudgee)
ka	Circassian
akha	"
akai	Berber
kai	Hausa
ikhf	Berber
og	Ugrian (Ost.)
uk	"
ugol	"
ngom	"
oklu	"

Hair (a.)

kuzhal	Tam. anc.
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kudalu	Karn. mod., Tulu.
[khesu	Karen
kosen	N. Tank.
kacho	Naga]
kitang	Australian (Kam. Syd.)
gitang	„ (Liverpool)
gi'an	„ (Bathurst)
kide	Tasmania
ketha-na	„
kesha	Sansk.
kassa	Lithuanian
kazh-eresh	Misj.
chaz	Circ.
kodi	Lesg.
ketschugui	Koriak
kili-gir	„
[(head) koltseh	Kamch]
gashi	Hausa

The Australian and Tasmanian variety as well the Sanskrit are connected by the vowel with the Koriak. The broad Dravirian form preserves the vowel of the Ugrian, Tibeto-Ultraindian and Ultraindo-Asonesian form of the ultimate root *ku*, *ug* &c. ("head"). It appears to be connected with the Caucasian form.

Hair (b.)

mir	Toda
mayir	Tam. mod.
[tala-mudi	Mal.]
wil	Aru
pelilo-gueni	Tasmanian
par-ba, par-cata	„
purari	„
[? min	Chepang]
mier	Lesgian (Andi.)
maar	„
pilus	Lat.
wlas	Scl.

The Tamil *mayir* and Lesgian *maar*, which are evidently related, appear to show that the full form preserved the broad vowel which

EYE.

The prevalent Dravirian term is *kan*, (also Brahui) *kann*, &c. It is found in Polynesian, *kano*. On the continent it is Chinese *gan*, Thochu *kan*. It is evidently one of the primary vocables of the Dravirian formation, and as the form is a rare one it illustrates the special Chinese connection of the basis vocabulary, as shown by the pronouns.

The root is more remotely connected with the Yukabiri *angoha*, Seythie *kus*, *gus*, *kas-ak kar-ak*, *osha*, &c, and Indo-European *ak*, *ank*, *agn*, *akshi*, *akis*, *oculis*, *okko*, *oko*, *augo*, *auge*, *oog*, *eye*. The corresponding Seythie *kar* &c although found as "eye" in Turkish only is a common Seythie root with other meanings. In Fin and Aino it is applied to "hair," and the original is probably to be found in the Ugrian and Yeniseian *kol*, *gol*. It is a common term for "beard" *agan* Ostiak (the Chinese and Dravirian form for "eye") *gar*, *gor*, *gur*, *ger*, Tung. *kal*, *koro* Yenise.; "mouth" *kur*, Ugr., *khan*, Turk. (the Drav. form for "eye"); "ear" *kor*, *kyr* Fin, *kolo*, *kul* &c, Yenise.; "hand" *kal*, *kol*, *gar*; "foot" *kol*, *kur*, &c.

The Australian *mir*, *mil*, corresponds in form with the Dravirian *mir* "hair," and the ultimate source was probably a slender form of the Seythie labio-liquid root for "head." Seythie no longer retains slender forms with that meaning, but it has them as words for "lip," "tooth," "ear," and "foot" while Caucasian has them for "face," "eye," "mouth," "beard," and "nose" (*mir*, *mer*, *ber*, *bir*, *pil*, *wil*).

The form *dala*, *dana*, is not now current in Asia as a word for "eye" save in Caucasian. It corresponds with the Dravirian *tala* "head" *tol* "hand," with the Seythie *tala*, *dil* &c. "head," and the similar words for "tooth," "hand" and "finger," in Seythie; for "eye" *toli* (Mingr. Laz.) "finger," "hand" and "foot" in Caucasian; and for "tooth" in Indo-European.

The Kol dialects have the full Tibeto-Ultraindian *met*, *med*, the vowel being that of the Gyarung, Burman, Simang and Binua forms, and not the common *a* of *mat*, *mak* &c. It should be remarked that this second and very widely spread root is also Chinese (*mok*, *mă'*).

Of the two terms prevalent in the proper Dravirian vocabula-

ries, the second, which is only found in Tamil (anc.), is probably of Sanskritic derivation, *nattam* Tam., *netram* Sansk. But as the root occurs without the *r* in N.E. Asian and African languages it may possibly be archaic in Dravidian. It belongs to the proto-Seythie basis of Sanskrit (comp. *Caucas. na, nuo, la, ala, Kamschat. lela, elad. elath, nanin, Koriak ilot, lalat, elifa, lilagin, Hind. nain, Arab aayn, Nubian nget, ones-ik, ma-inka, Galla isha, Danakil cuti, Malagasy-Asones. inty "see," Malay lihat "see," Binua nihat "eye."* The N. W. Australian *ira, Mudjee lun, Torres St. ir, il, of ir-kop Erub, il-kap Murray I. (kap being a separate root, dana-kap "eye" Port Lihou, ii-kab "temples" Erub)* with the Nilotic *il, ilan Saum., ila-tua Galla, aire Tigre, ili-kumiah Shangallah, are Fazoglo, yel Agau, to-lele Bishari, ile Palasha, are still more faithful to the archaic form preserved in N. E. Asia, and, like a large proportion of the vocables of the Nilotic province and Africa generally on one side and of the Dravido-Asonesian on the other, are referable to the earlier eras of the Seythie or proto-Seythie movements on the southern regions of the Old World. The same root is common as a term for "head."*

The prevalent Australian term *mil, mir, mi, me, ma*, may be connected with the Tibeto-Ultrindian *nik, mit, mid, mni, mi*, (*Tukpa melong*), but the Caucasian *ber, beer, ber-ik, ber-gish, ber-g, bera-ka*, suggests a different line of connection. The Australian *mebarai, mibare, mahara* appear either to be reduplications or to postfix the same root in one of its other and more prevalent applications "head," "face." Comp. *ga, ka, ka-bara, bura, balang, wari, iwadi, &c, "head"*. So in *Mille baram, New Caledonia balu &c, New Hebrides bāu, bail &c.* The same root is very common as a term for "hair" [See HEAD, HAIR]. In *Menado (Celebes)* it is used for "eye," *waren*, and in *Tasmania* we find *e-verai, nu-bera, nu-bra, la-pena, el-pina, ma-meri-ka, namuru-k, pola-to-ola.* *Torres St.* has *poni "eye-ball,"* and in some compounds "eye".

In N. E. Australia and *Torres St.* *dana, daan, dala, dana-kah* occur as words for "eye." The only other Asonesian example of a similar term which I have remarked is the *Loyalty I. (Lifu) tala-mek "face," ala-mek "eye,"* in which *mek* is the common term or "eye," "face," already referred to. Comp. the *Binua tam-*

langop, Batan dangoy, Kayan inang, Buol lan-ji, Tojo ling-king, Ende rangia, all words for "face," and the Naga than "face," Dravirian tala &c. "head."

EAR.

The root, ka, ki, ke, che, se, is so common in different formations that it is difficult to indicate any special affinities. It is evident from its taking the Dravirian postfixes *du, da, mi, vi*, in different dialects, that the pure root belongs to the native basis glossary. As it is found with other postfixes in Scythic &c, it appears to be proto-Scythic in Dravirian. A variety of the same root is prevalent in Australian, *kala, kura, kure, kuru* &c. This resembles Sanskrit, Hindi, Georgian Scythic and Galla forms. It was probably the North Dravirian or Gangetic form, and later of importation into India than the South Dravirian, the Scythic postfix appearing to be conereted and to have accompanied the vocable in all its wanderings.

There is a second archaic Asonesian term, *pol Binua, pil Torres St., bina, bena, bidne, &c.* Australian, *pel-vera-ta, ti-bera-ti* Tasm., which is N. E. Asian, *wilugi, wilyt* &c. (Koriak); Ugrian, *pel, pil, pul, bol* &c; and Hindi, *bol*.

The Kol *lutur* is a rare term. It is probably archaic and proto-Scythic,—*yeluth, ilyud* Kamsch.

<i>kada</i>	Tam. mod.
<i>kada</i>	Mal.
<i>kavi</i>	Tod. Gong
<i>kivi</i>	Kar.
<i>kimi</i>	"
<i>kemi</i>	Kurg.
<i>kebi</i>	Tulut
<i>chevi</i>	Telug.
<i>sevi</i>	Tam. anc.
<i>khetway</i>	Male (double postf.)
<i>khebda</i>	Uraon (double postf.)
<i>karna</i>	Sansk.
<i>agantsch</i>	Arm.
<i>ugn</i>	"
<i>kan</i>	Hindi &c.
<i>kanung</i>	Milch.

khana &c.	Ultraindian.
kenei	Yengin (New Cal.)
kueni, kowan	Tasmanian.
kalajan	Australian.
kura	"
kure	"
karusa	Masid
gerip	Erub
kowra	Port Lihou
skor	Kasia
nakor	N. Tangk.
machor	Garo
nakru	Mish.
kuri	Georgian
guru	Galla
gura	"
ukuna	Dalla
kulak	Turk.
kologan	Yenis.
korna	Ugr.
kunya	Tangus
ku	Ugr.
ko	"
kui	"
&c. &c.	

HAND.

(a). The Tamil and Karnataka *tol* is Samoiede (*utol*). It is also found, slightly varied, in Yeniseian and N. E. Asian vocabularies.

<i>tol</i>	Tam. anc., Karn. anc.
<i>utol</i>	Samoiede
<i>tolondscha</i>	Yukahiri (double postf.)
<i>tono</i>	Kamsch.
<i>ton</i>	Yeniseian
<i>son</i>	Korea
<i>taalo</i>	Lesgian.

(b.) The more common *kai*, *kayi* (*yi*, *i* being probably the def.) is an archaic variety of a root which, in its Scythic forms, is very

widely disseminated (Caucasian, Iranian, Gangetico-Ultraiudian, Asonesian.)

kai	Tam. mod., Tuluv.
kayi	Karn. mod., Toda
kaya	Mal.
kaik	Gond
khekkah	Uraon
cheyi	Telug.
khai	Bodo
akhui	N. Tangk
kuit	"
akhu	Kumi

The root with a consonantal final *t*, *d*, *l*, *r*, is Seythic, Caucasian Iranian, Gangetico-Ultraiudian, and Asonesian. The Seythic forms are found in all these families. The Dravirian appear to be more archaic.

(c.) The Kol *thi*, Gond *the*, is found in Kasia *ha kti*, and Biua *thi*, *ti*. The Moo and Anam *tai*, Ka *dei*, are probably connected with it, but they also resemble the Dravirian *kai*. The closest foreign affinity is with the Semitico-Libyan *it Gara*, *haiyit* Mahrah, (whence the Tigre *id*), Hebrew *iath*, Berber *thith*, Arabic *yad*, *yodan*. The root is found in the Chinese *sia*, Japan *te*, Samoiede *hute*, *huite* &c.

The Male *sesu* is probably a variety of the same term. But it may be from the Telugu, *cheyi*, a variation of *kayi* from the common interchange of *k*, *ch* and *s* in Dravirian phonology.

The Australian *biril*, *mara*, *mana*, *mangal*, *mura*, *tamara*, *marigal*, *ma*, &c, Torres St. *bai*, *pai*, New Guinea *mareh*, Mille *ban*, Loyalty I. *wana* of *i-wana-queni*, New Caledonia *yam-wam* (Bailad), Malicolo *vean* of *vean-bruas*, Celebes *pale*, Borneo *bareng*, *pinang*, Samatran *lungu*, *pungu*, Sambawa *ima*, Sasak *ema*, Simang *weng* are Ultraiudian—van Maram, *a-pan* Champhung, *pung* Labuppa, *mu Lan*,—and N. Gangetic,—*moa* Kiranti, *moi* Gurung, *palara* Newar, *promji* Murmi. The root is found with the same meaning in Koriak *minyā*, *minyil-n*, *minagylgen* and Latin *manus*. Terms for "hand," "finger," "arm," "foot," "leg," interchange to a great extent, and in the Seythic languages the present one is chiefly found as a term for "finger," a meaning

it also has in several of the Gangetic-Asonesian tongues in which it is current for "hand." Samoiede *ubai*, (Torres St.)* *mun*, *munon*, Japan *ibi*, Ostiak *pane*, Wolga *parne*, Peru *pehu*, Turk. *bar-mark* &c., Caucasian *palik*, German *vinger*. To connect these with the Ultraiidian and Asonesian terms for "hand" I may instance the North Gangetic *brang*, *prach*, *bramu*, Mikir *munso*, Australian *mura*, Tarawa *abuni-bai*, Arn *wawanli*, New Guinea *amui*, all signifying "finger." Hence also the Malay *palit* to smear &c. with the finger, and perhaps also *pala* "to beat."

The various Dravirian vocables for Foot, Mouth, Skin, Tooth and Bone have affinities of a similar character. Some are more archaic than the common Indo-European and Scythic, the closest affinities being African, Malagasy &c., but each of the terms has one or more Scythic or Yeniseian roots. Most have Australian or other Asonesian affinities.

The common Australian term for "foot" *tina*, *dina* &c. is Indonesian and Gangetic-Ultraiidian (Bodo *a-theng*, Lau *tin* &c.) That for "tongue" *talan*, *dalan*, *tale*, &c. (Tasm. *tulana*) is Indonesian, *dila*, *tura*, *jala*, *jila*, *chila* (Phil., Celeb., Born.), Gangetic-Ultraiidian, *thali* Naga, *chulai* Bodo, and Scythic *til*, *tel*, *del* &c. Turkish, *jolma* Ugr. That for "tooth" *irang*, *ira*, *yira*, may either be the Dravirian *eyiru* (anc. Ten il) or a contraction of *tira* L. Macq., dear Moreton B., *tirreg* Erub, *tirig* Muruya, *didara* Jakun, *dara* Bangali L. which appear to be connected with the Iranian *danta*, *denta*, *dens*, *adamn*, *dandan* &c. The latter forms are also Australian and Indonesian, *danga* Cape York, *dang* Masid I. Pt. Lihu, *tango* Bisayan, *dungitu* Buol. *Irang* would be referable to *dang*.

The Papuan vocabularies of Torres Strait have preserved numerous Scythic—chiefly Samoiede and Ugrian—words not

* In comparing names of parts of the body it is to be observed not only that the same vocable comes to be applied to different objects, but that a common generic term for "man," "body" &c. sometimes accompanies them, and is apt to take the place of the term to which it was originally a mere adjunct. The words for "head" "hair," "skull," "forehead" "face" and "eye," for "nose," "tongue," and "ear," for "hand" "finger," "arm," "leg" and "foot" are much interchanged in the Asonesian vocabularies. One of the most prevalent of the words for "head" &c. in some of the preceding lists appears to have had a generic meaning in some vocabularies. In Tasmanian we find *le-pena* "eye," *pel-veru-ta* "ear," *ro-roela* "elbow," *le-pera* "neck," *mena* "nose" (W. Tasm.), *mena* "tongue" (E. T., so *mi-mena* Brumer. I.) *ka-mena* "chin," *mana-bena* "knee," *ana-mana* "hand," *na-mana* "tongue," *ma-meri-ka*

found either in Australian or Dravirian languages, but evidently belonging to the Draviro-Australian era of Asonesia and Ultraindia, when the rude Indo-Australian tribes probably possessed some hundreds of vocabularies, more or less related to each other and to those of the early Scythic or proto-Scythic tribes of Middle and Western Asia and of Africa. In the present class of words we find *bai* "hand," Samoiede *u-bai*; *pil* "ear," Ugrian *pil*; *karusa*, *ger-ip*, *kowra* &c. "ear" (also Australian *kure* &c.), *korm* Fin, *kul-ak* Turkish or Kasia; *mus*, *mush*, *muchi* "hair," *i-wusa* Fin (*bus* *Fazoglo*); *mit* "lip," Samoiede *pite*; *taip* "lip," Samoiede *tip-che*; *ney* "tongue," *enya*, *inyi* &c. Tungusian, *nyema* Samoiede; *pit*, *pichi* "nose," Ugrian root *pid* (Chinese *pi* &c.) The other Asonesian languages have a basis of similar archaic Scythic and Scythico-African terms, but the names for the more common objects, such as the above, have in general been replaced by vocables derived from the later intrusive formations, Malagasy and Ultraindian. Both of these, and especially the Ultraindian, being very Scythic in their glossaries, it is often doubtful by which current Scythic words found in Asonesia were imported. With the Malagasy terms there is in general less room for uncertainty, although the Malagasy and the Ultraindian varieties of Scythic roots sometimes closely resemble each other. The chief difficulty is in distinguishing the archaic Draviro-Australian from the more recent Ultraindian terms of Scythic origin, and it is increased by the fact of Ultraindia having been the line by which both of these Scythic currents have flowed to the islands. There need seldom be much hesitation in referring Asonesian words with a well marked Dravirian, Malagasy, Tibetan or Mon-Anam form to these sources respectively, but there are

"eye" *e-vera* "eye," *ka-wara-ny* "belly," *yana-o-ple* "teeth," *man-ra-ble* "face." In Tasmania we find *kure-murang* "tongue," *pen-wann* "tooth," *man-wam*, *perangi* "lips," *wan-dim*, *wan-dai*, "nose," *bor-am* "face," *pal-in* "hair"; in New Hebrides, *wara-lang* "nose" *barong* "hair," *mara-ma* "eye" (Pol. &c.), *bra-brun* "breast," *kom-prian* "knee"; in Toro *wari-hu* "hair," *bar-is* "nose"; in New Ireland *pra-lenhek*, *pala-lignal* "ear," *bra-lima* "hand," *balan-keke* "foot," *pal-bulik* "shoulder"; in Waigui *bra-pine* "hand," *bra-min* "arm," *enou-braem* "hair"; in Dore *bra-lima* "hand," *bra-min* "arm," *sansun-beri* "neck," *senem-bur-em* "hair," *snom-beri* "nose," *ga-bur* "eye lashes," *krom-beri* "back," *bun-beri* "head" &c.; in Australian *balang*, *ka-bara* &c. "head," *me-barai*, *ma-bara*, *mil* &c. "eye," *tum-biri*, *wiling* &c. "lips," *muru* "nose" (*ka-muru* Celebes), *ta-mara*, *maru*, *mura*, *bir-il* "hand," *wa-para*, *ma-pal*, *nga-mura*, *biri*, *biring* &c. "breast," &c. &c.

many Scythic vocables in the Gangetico-Ultraiadian and Asonesian languages which may either be of the archaic Dravido-Australian era or of the later East Tibetan. The Torres St. *kerim*, *kirim* "head," Timor M. *garain*, Tana karab, New Caledonian *gar-moing* (*kara-mai* "face") *Sinang kala* (Ceram *ukar* "hair"), have Tibeto-Ultraiadian affinities (*koro* Bodo, *mkura* Mishmi, *kra* Gurung "head", *kara* Singphu, Milch., *kra* Tib. "hair"), but Malagasy has *kara* "skull," and the Kashmiri *kala* "head," Latin *cranium*, Fin *karm* "hair" &c. suggest the possibility of a still older derivation. Another term, *koik* "skull" Murray I., *koik* "forehead" Port Lihon, *koiku*, *ib.*, Cape York, appears to be clearly Ultraiadian (*koi* Binua, Nancowry, *kui*, *kok* Manipuri D., *kuk* Uraon). Tag "hand" is probably not a derivative from the Malagasy *tanga*, *tanḡanu* like the Indonesian *tangan* &c., but an Ultraiadian term allied to the Sangir *tak-lar*, Viti *thaka*, Toro *haka*, Vate *tako* ("hand," "foot"), *otoho* Goront. Comp. the Naga *dak*, Aino *dek*, *tegi*, Yenisei, *togan*, *tegon* "hand," *tak khyai* Singphu "foot." Tang and tak are evidently variations of the same ultimate root.

Names of inanimate natural objects.

WATER.

The names of the more common inanimate natural substances have a like range of connection. Thus for "Water" there are three South Dravirian terms. Nir Kurgi, Tuluva, niru Karn. *nillu* Telug. may be of Sanskrit derivation (*nir* Sansk.). It is a rare Scythic and Semitic term *enyer* "river" Wolg., *nehr* "river" Turk., *nahr* Arabic. It is not found in Asonesian vocabularies. The Koriak *inh*, Ostiak *eny*, preserve the *n* form of the primitive root, which is also found slightly modified in the Lepcha *ong*, Anam *ni*, Erub *nie*, Madura *eng*.

It is more probable however that the original Dravirian form is preserved in the Karnataka *tiru*, Brahui *dir*, in which case the Sanskrit must be considered as a derivative of the Dravirian modification *nir*. The root *tir*, *di*, is very common, *ti* Chep., Milch., *di* Magur, *ti*, *thi* Karen &c. The broad forms are Scythic, Chinese, Ultraiadian, Asonesian. The Ultraiadian (Luhappu) and Micronesian (Tobi) *taru* (Champhung *thari*) resemble the Dravirian.

Punal Tamil (anc.), *vellam* Malayalam "water" probably

contain the same labial root that is the most common term for "river," *pa* Toda, *varu-punal* Tam. (anc.), *puzha* Malaya., *po/s* Karn. (anc.), *Kurg.*, *hole* Kar. (mod.), *aru* Tam. (mod.), *eru* Telug. [from *varu*, *veru*], *yer* "water" Gond. The root *pa*, *va*, *ve*, *pu*, *po*, (*ho*) is Scythic and it is also found in all the other families under a very great variety of forms and combinations. In the N. E. Asian and Scythic terms the primitive root generally takes a final *r* or *l*, *amar*, *mura*, *muran*, *muren*, *wire*, *polym*, *bere* &c. "river" Scythic, *mul*, *mel* "water" Korea, *mimel* &c. "water" Koriak. This is preserved in the Sanskrit *vari* "water," *Pashai wark*. The same form is common in Semitico-African, *bahr* "river" Arabic, *mura* "river" Makua, (Mongol) *mumel* Felup (Koriak). The Dravirian *varu* shows the same combination and it has been transmitted to Asonesia,—*"water"* *warari* (*Utanata*), *weari* Mairasi, *walar* Lobo, *purai* Bathurst,—*"river"* *brang* Sambawa, *umala* Buton, *marye* Trusan, *bilo* Sydney &c.

The N. Indian *pani* "water" is an allied form, to which the Australian *bana* and Indonesian *banyu* are related.

In the other Dravirian varieties the root appears pure with native postfixes. As examples of the simple root with its vowel variations I may instance the Samoiede *bu*, *bi*, *be*, Pashtu *aba*, *abu*, *abe*, (Sanskrit *apah*, Zend *apem*, Persian *ab*.)

The term *tanni* is confined to Tamil. It is Yeniseian, *tatany* "river". The Gond *donda* "river", *Todava tude* "river" are probably variations of the same term. It appears to have spread into Ultraindia, *dak-tani* "river" (*dak* is "water") *Ka*, *tunli* Khom.

The Male *am*, *Uraon um*, *Kasia ha um* "water," is a variation of the labial root already noticed. This form is found in the Semitico-Libyan family, *ma*, *ma-at* Arabic, *mek* Gara, *maim* Hebrew, *me* Galla, *mah* Egyptian, (*ba* Malagasy).^{*} The Nicobar *mok*, *mak*, Tasmanian *moga*, like the Gangetic *um*, *am*, may have more direct N. Asiatic affinities. Comp. *nu*, *muh*, *muke*, Tungus. (*waka* Aino.).

The Kol *dah* "water" is a very common root,—Scythic, Iranian, Ultraindian, Asonesian. It is probably the Sanskrit *udak* which appears to have been early received into the Kol or Gange-

^{*} It is also found in Brahui, *taho* "wind."

tic vocabulary and thence spread to Ultraindia and Asonesia. Mon dat, Tobi tat, Ka dak, Khom. tak, tag, Nicobar rak. But it may have been pre-Sanskritic in India and Ultraindia. It is Yeniseian, dok, Fin tat-se and African, mdok "water", dek "river" Woloff, dogo "river" Galla, date "river" Fazoglo, the root being da, ta, &c. Other variations are found in the Turkish elga, Ultraindian lik, lika, Sunwar ri, Burman *mwik* (Rakhoing dialect) Khom. prek, Asonesian leko, ilug, Galla lega, where the root has the slender form li, ri, le.

The Uraon cheip "water" is Tibeto-Ultraindian, che Miri &c. &c.

The Kol garra, Uraon khar "river," Chepang ghor, is Kashmiri, kol, kuol, Pashai gal, Semitico-African,—khar Gara, khor Mahrah, Ar., koli Tigre, kor-ama Hausa, gar "water" Saumali, kero "water" Darfur; Mongol gol, Samoiede kolda, Yeniseian "water" kull, Wog. "water" agel, Javan. "river" kali, Australian "water" kali, kaling, kalere &c.

AIR.

Of the four South Dravirian terms one is New Guinea and Australian on the one side and Georgian on the other. The root ka, ga is archaic in Dravirian, taking different native postfixes.* The North Vindyan ta is probably a variation of the same root. It is Scythico-Iranian (at Fin, ot Armenian, atma Sansk. &c).

A second term, ela, is Scythico-Iranian, Semitic, Ultraindian, Asonesian.

A third, bar, is Scythico-Iranian, Ultraindian and Asonesian.

A fourth, puv, is N. Indian and Australian.

The Kol vocable is found in Anam. It appears to be archaic and related to the Semitic hawa &c.

STONE.

The principal vocable kal, kala, &c. has spread to Asonesia—kala Polynesian, kain Australian, the latter being closer to the Pasutu variety of the root, kani. The Sindhi kod is nearer the Dravirian, which is the pure Fin kalle, Armenian khar.† The term is also N. E. Asian (Yukahiri, Kamschatkan).

* It is Brahui, khali.

† Koelle's vocabularies supply mel, mome', men. mau N. W. Nigritia, omi. ame, mi, min. mmeli, amu, Niger, Chadra &c.

MOUNTAIN, HILL.

Five vocables are current. Two, found in Gond and Male only, are of immediate Tibeto-Ultraiudian derivation. Both are varieties of a Scythic root. The others are archaic. Of two forms of a Scythico-Iranian root, one, found in Kol only, appears to be the more ancient. It is Samoiede, Saumali-Galla, Australian, Celebesian and Philippine. The second form is Fin, Iranian and Australian. The third root is also Scythico-Iranian and in form Yeniseian. In Asonesia it has only a limited Indonesian range.

Of the two Southern roots, one, *var*, *par*, *mal*—Australian *wahr-ro*, *wariat*—is Scythico-Iranian. Fin *ware*, Ostiak *palta*, Wolg. *wanda*, *panda*, Sansk. *para*, Kashm. *bal*, *wan*, Aino *buri*, Samoiede *boro*, Turkish *muron*; Fin *wuori*, Latin *mons*. The *u* form is preserved in the Saumali *boro*, *bor*, Galla *borga* on the one side of the Indian Ocean and on the other in the Kol *burn*, Australian *murdo*, *mordo*, *murde*. It is also found in Indonesia as a word for "hill," Philippine *puru*, *palu*, Celebes *bulu*. The New Guinea *wera* is probably a local modification of the Dravido-Australian *war* but the form is also Samoiede *bre*, Ostiak *pel*, Caucasian *mêhr*, German *berg*.

The second root *ko*, *kun*, *kud*, *gud*, is also North-Gangetic *gun*, *kung*, *kang*, and Indonesian, *gunong* (Tamil *konam*). The root is Scythico-Dravirian, but the Dravido-Asonesian form is Yeniseian, *konony*. This broad form is also found in the Fin *gora*, *kuruk*, *gures*, *ko*, Persian *ku*, Zend *kof*, Latin *collis*, Mahrah *kalun*, *gar-tin*. Another Yeniseian form, *kar*, is found in Pashtu *gar*, Galla *gara*, Maram *kalong* and Ceram *ukara*. The slender Ugrian *ky*, *keras*, Turkish *kir*, is found in Georgian *kirte* and Sanskrit *giri*. The ultimate guttural root is Chinese and Siamese as well as Ugrian. The Karnataka and Taluva forms *gudda*, *gudde*—preserved in the Kol *gutu* "a small hill"—appear to have spread into Asonesia at a much earlier period than the South Dravirian and North Gangetic *gun*, *kun*, if the Australian *kata* be referable to it.

In the North two other vocables are found, *dungur*, *dongar* Gond, and *toke* Male. Both are Gangetico-Ultraiudian, Tibetan and Scythic. Sindhi has also received the Japanese, Turkish, Tibetan and Male form (*takar*). The New Hebrides *takuar*, and *tof* appear to be allied to some of the preceding terms.

Terms of the preceding classes exist in the primitive era of glossology, and the roots current for them in a family of languages may be of greater antiquity than the formation itself. The vocables we have examined are of different ages in the Dravirian family, but most of them must be considered as at least coeval with the formation, while many of the roots have probably existed from the monosyllabic era, first receiving their present forms when the linguistic type became Seythoid. They do not necessarily throw any light on the archaic condition of the race or on the early history of its civilisation, for such terms are essential elements of human speech in all ages, and they are found in the vocabularies of the most barbarous as in those of the most cultivated tribes. The forms of the vocables indicate a large measure of community with the Seythic, Caucasian, and primary Iranian races, and a less one with the Semitic, but this community may belong solely to a very archaic and barbarous state of society similar to the Australian, for anything these terms can teach us. I will now take a few words implying an advance beyond such a condition, and indicating the possession of certain arts and usages of a civilised character.

Names of Domesticated Animals.

The domestication of the dog, and that of the hog, of the cat and of the fowl were probably amongst the primeval events of human history. That of the larger quadrupeds must have been later, although it may have long preceded the Australian era. All that can in strictness be concluded from the absence of the large domesticated animals in large portions of Asonesia is that the means of carrying them to the islands did not exist in the Australian and Niha-Polynesian eras. The light which this class of names can throw on the early history of the Draviro-Australian family must therefore be confined chiefly to the continental branch.

The comparison of the names of domesticated animals is complicated by the fact that they have been interchanged to a remarkable extent. This has arisen from tribes being apt to apply to those with which they become acquainted for the first time, the names previously current for others with which they are familiar. It is not surprising that the "cow" and the "buffalo" should be known by similar names, or even that a tribe which possessed the

cow, should include the horse in the same term when they first saw it. But we have modern instances of races which knew only the dog and hog, applying one of their names for these animals to the cow, and a comparison of vocabularies shows that in archaic times a similar course was frequently followed. In fact some words have been so much pressed into service to meet such emergencies, that if all their applications were included in one vocabulary the generic meaning of "quadruped" might be given to them. The name for the dog has been applied to the cat, the hog, the cow, the horse &c. Many of these new applications become valuable guides in tracing the spread of particular roots and varieties.*

Another source of difficulty and error in comparing the names of domesticated animals in different families of language is that these names are liable to change repeatedly, long after the first acquisition of the species. Such terms, and particularly those for the horse, are apt to be spread with the breed into foreign countries. In many groups of languages, owing to this and other causes,† there are various terms for the horse, having distinct ranges of foreign affinities. Thus in English we have *horse*, Semitic, (also African and ultimately Scythic), *mare* Scythic (and African), *colt* probably a Celto-Scythic term (*gormydd* Welsh, *hunde* Samoiede, &c.), the Irano-Celtic *equus*, *each*, in the equine terms derived from Latin, *foal* Ugrian &c. These terms had probably separate origins, and belong to different eras of English and of Teutonic or of Indo-European history.

CAT.

1. The most common term, *pusei*, *pusi*, *puchcha* &c. is N. Indian and Indonesian. It is also African under the form *mus*, *musa*, &c. and English *puss*. The Pashtu slender form *pishik*, *pishee*, Brahui *pishi*, Milchanang *pishî*, found also in Ultraindian *pishik* (Kapwi), and Rotuma *pitsa*, is Caucasian *pishik* (Chari), Semitic *bis*, African *topise*, *fisona* and Ostiak *misak*, (also *matska*). It is probable that the Brahui, Pashtu, Milchanang and Kapwi

* Some illustrations of this have been given in the glossarial Appendix to the Semitic-African sub-section.

† The chief of these is the redundancy of terms to denote varieties of familiar objects in which most vocabularies appear to luxuriate in certain stages of their growth.

are derivatives from a western term now represented by the Chari and that the dissemination of the broad form was a later event. Rut *mushik*, *mushak* is also Scythic. The Chari term with its postfix is referable to the Ostiak and the Semitico-African terms to Chari. The *m* form was probably the original, as it is found in Ostiak with the slender vowel, *mis*, in Africa with the broad vowel, *mus*, and it may be added in a widely spread word for mouse (*mush* Sansk., *mus* Lat., &c). *Piss*, *pass*, *poss*, *pass* is "dog" in Slav. and *pisse* is "mouse" in Samoieda.

2. The Toda *kotti* is a common Scythico-Iranian and Caucasian term. *Kuti*, *kata*, *kato*, *kiti*, *kotshum* &c Ugrian, *kisa*, *kazhi* Fin, *kot* Slav., *katze* German, *kat* Dutch, English (*cat*), *gato* Spanish, *gadu*, *kit* Armenian, *kito* *keto*, *geto*, *koto*, *kata*, *katu*, *gado*, *gedu*, *gadi*, *cheto* Caucasian. The ultimate root is found in Korean *koi*, *kuini* "dog". The form *kot*, *kok*, *kit* &c. is also widely spread as a term for "dog." [See Dog.]

3. The Karnataka *biku*, *beku*, may be a contraction of *birku*, *berku*, from the analogy of the Uraon *birkha*, Male *berga*. But as Gond has *bokal*, *bhongal* for the male, and Marathi *boka* (com.), and the Karn. form is found in Batta (Sumatra) as a term for "tiger", *biku*, and in Buton for "cat", *beku*, it is probably distinct. Comp. *popoki* Polynesian, *paka*, *mpaka* Suahili &c. and a widely spread word for "dog" *mog* Tarawa, &c and "goat," *bok* Dutch, *bakra* N. Indian &c. The ultimate root is probably *bi* and identical with *bi*, *mi* of 1. Mongolian has *mi*.

4. The *bir*, *ber* of Uraon and Male is found in Gond *bilal*, Bengali *biral*, Kol *bilai*, and is a common Hindi and Tibetan term. Serpa and Sunwar have the Male form *bermo* (Murmi *tawar*, Gurung *nawar*). In the South Dravirian and Gond dialects it is the prevalent term for "tiger," *pili*, *puli*, *buli*. The Maldivian *bulau* "cat", has the broad vowel of *puli*. The Kashmiri *brair* &c. resembles the Bengali and Gond. The root does not appear to be common, unless it is prevalent as a word for "tiger". Hind. *palang*, Pers. *palank*, Arabic *babir*, &c. [Batta *babet*] Korea *pon*. But the Latin *felis* shows that it is not confined to southern Asia. The same root is probably contained in some terms for "dog" *balu* Maldiv., *balla* Singhalese, *a-val* Champhung, *perro* Spanish, *wuri* New Guinea (Utanata), *wariet*

"eat" Gafat, (the same form with the Semitico-Libyan fem. postf.) Bil, bi-r, bi-s (bi-t) and bi-k appear to be the same root with the ordinary Scythic range of commutable finals.

5. The Kurgi nari, Malayalam niri "tiger," Burman nira, is Korean, nal-bi (Amharic nahar).

DOG.

1. In the most common Dravirian term the root appears to be na, la, ra, (*nagi, naya, nai, noi, alay, ala, era*). It is related to the Gangetic *nangi, nagi, nagyn, neko*, and to the Savo *ngaka* and Australian *nagi, nago*, these Asonesian terms being evidently of Gangetic derivation. In the vocabulary I have considered it doubtful whether na be a root or a prefix in these terms, and lean to the opinion that *nagi* &c. was a softening or contraction of *nangi, nagi*. From the analogy of other Dravirian terms I now consider it clear that *yi, i, ya* is merely a definitive postfix, and na, la, ra, the root. It is Australian *alait* (allay Male), *alli*. [The Polynesian *uli* is a contraction of *kuli*, similar elisions of the consonantal initial of a syllable being common in that language]. The Draviro-Asonesian root is Circasian *lah*, Georgian *laki* [=na-gi Gangetico-Austral.] and N. S. Asian *inu, Aino, Japanese*. The Bisayan *iru* is probable of modern Japanese, and not of archaic Draviro-Australian origin. The Tungusian *nyia, nenaki, nenakin*, Mongol *nokoi, nogai* [Samoiede *weneku, bu-nike, kanak*] appear to be related both to the Aino, Japanese and Dravirian, and to the Caucasian and Gangetico-Australian varieties. The term is not a common one, and it appears in the Dravirian-Australian family to be older than the Scythico-Iranian era of its glossology, when other vocables for "dog" were widely spread over middle and western Asia. It may either belong to the primary glossarial basis, of a N.E. Asian character, or to the allied Semitico-African for it is found in both. Hottentot *arieb* masc. *aries* fem., Serakoli *uley*, Galla *lurn-tai, lurul-tai*. The close resemblance between the archaic African *ari* or *arie* and *uley* and the Male-Australian *alay, alai, ali*, renders it probable that the latter is of the Semitico-African era of Scythic or proto-Scythic like so many other archaic Asonesian vocables.

2. The Telugu *kukka* is exceptional in the South and probably

of later acquisition. It is North Indian,* whence it has also spread to Asonesia both in the Bengali-Telugu form (Beng. kukkur) and in the Hindi (kutta, kutto). Bajo koko, Mangkasar kokang, Kagayan kito, Kissa gida, Endeavour Riv. kota. It is E. African kutta, kutti Danakil, N. E. Asian, gottun Koriak, kossa Kamsch., and as applied to the "cat" Korean, Seythie, Caucasian, Iranian, Dravirian. The guttural root under various forms, and the same root with other postfixes, l, r, s, is very common in Seythie and all the families of language that have a large glossarial element of Seythie (Tibetan, Ultraindian, Caucasian, Semitico-African, Iranian, Asonesian of different eras.) For some examples of this wide diffusion see the Africo-Semitic subsection and the Tibeto-Ultraindian and Mon-Anam vocabulary in Chap. vi.

As it is also applied to the "cow" and the "horse" it was probably one of those words that were early used for the first domesticated quadruped. As examples of these applications I may instance for "horse" the Yeniseian kut, kus, E. Iranian and Dravirian gud, ghotā, ghora, kudra &c, for "cow" the Ugrian kusa, kas Tungusian kukur [in Bengali "dog"], and for both "horse" and "cow" in the same language, the Yeniseian kus, kut, and the Kamschatkan kousha "cow", kasa "horse."

3. The sibilant root of the Kol seta is equally prevalent with with that of the preceding term. It is Gangetico-Ultraindian and Indonesian, Iranian, African (the sibilant sometimes changing to the aspirate). The Kol variety appears to be an archaic Dravirian term. It differs considerably from the prevalent forms both on the Irano-Caucasian and on the Gangetico-Ultraindian sides. It resembles the Aino sheda (Kamsch, hetan) more than any of these and as usual some analogous forms are found in the upper Nilotic vocabularies Agau gezema &c. The Caucasian he (Chari) appears also to preserve the N. E. Asian form, unless it be a contraction of huc (Awar) which has the broad Ultraindo-Asonesian form (asue, asu, su &c.) analogous to the Sanskrit shoa. The Kasia kasen is probably a derivative from the Kol. [For other applications of the root, see Hog.]

4. The Singhalese and Maldivian bālla, balu have been mentioned under "Cat."

* Brahui has a variation of the same root, kuchak.

HOG.

There are two terms, both archaic.

1. The form of the common Dravirian term *panri*, *pandi*, *panji*, *panni*, *poti*, *padi* is peculiar. The ultimate root *pa* has numerous foreign affinities, being found by itself, and with other postfixes in Scythic, Tibeto-Ultraindian, Malagasy-Polynesian, and African. (See Tibeto-Ultraindian Voc. App. to chap. vi.) If the *a* be part of the base the closest affinities are with the Scythico-Iranian base, *par*, *por* &c of *por-os*, *por-h*, *par-s* &c.

2. The anc. Tamil *kezhal*, Male and Uraon *kis* is Circassian *kashka*. In Asonesia it occurs in the Batan *kuis*. The root is an archaic one, widely applied to "dog" (also to the "cat", "cow", "horse.") The Kol *sukri* is Sanskritic.

GOAT, SHEEP.

Many of the vocabularies to which I have access do not contain these terms. All the Dravirian vocables for "goat" are also used for "cow", "buffalo" &c in other families of language. The most common is Caucasio-African, and Iranian.*

BUFFALO.

The ancient Tamil and Vindyan term is exclusively Indian, Ultraindian and Indonesian, and the probability therefore is that the native wild buffaloe of India was originally domesticated by the Dravirians themselves and then diffused to the eastward. The same root however occurs in other languages applied to the "cow," and it would thus appear to be of Scythic or at least S. W. Asian derivation. The current Dravirian term has Chinese, Ultraindian and, as applied to the "cow", Scythic, Slavonic, and African affinities. It is probable that both terms were used for "cow" before the Dravirians applied them to the buffalo.

1. *karau* Tamil anc. [*karavai* "a milch cow"], *karu* Karn, Tod. "a young buffalo," *haliya* Gond, *kara*, *kera* Kol. The term, like many others, has spread from the Kol (or an ancient Lower Gangetic language) to Ultraindia. It is found in the Kambojan family joined with a common root for "Cow", *Karbu* Kambojan, *kar-pu* Ka, *ka-pao* Chong. From Ultraindia it has spread to Western Indonesian (*karabau*, *karbau*, *kabu*, *karambau*, *karbu*, *kapa*, *kawa*, &c. &c.) thus indicating the country

* Math, "goat," Brahui.

from which the buffalo was first imported by a civilised insular nation.

The term is a common Scythico-Indian and Indo-European one for "cow" *goru* Hind., *ukur*, *hokor*, *hukur* Tungusian, *karo-wa*, *koro-wa*, *kar-we*, *kra-wa* Slavonic, *kur* Icelandic. In the other Scythic languages it is generally combined with the sibilant root, *sa-gar*, *is-kal*, *ush-kal*, *sy-gir* &c. Ugrian.

It has a wide currency as applied to "horse", "dog", "cat."

2. *erumai iramai* Tam., *eruma* Mal., *enumu* Telug. *erme* Tulav, *yerme*, *emme* Karn. *ira*, *ir*, Toda ["cow",—*uri* Mandala, *udu* Uraon, of Male; "bullock:"—*yerutu* Tam. *yelta* Karn., *yelta* Tod.] As applied to the buffalo it has no foreign affinities. But it is a Scythico-Caucasian, Iranian, Semitic and African root for "cow." [See Cow 6.]

3. *mankha* Uraon, *mange* Male. This term is of Tibeto-Ultra-Indian derivation, *man* "cow" Naga (root *ma*, *ba*, *pa*, &c). [See Cow 1]. In the Ultra-Indian languages the root is also applied to the buffalo.

4. *bhitkil* Mandala, *budkil* Gond (Gawil,) *bode* "a female buffalo", Gond 'Saonie Chapara'. *Bhit* is a North Gangetic form of an Ugro-Dravirian term for "Cow" [See Cow 1.] The root is also applied to the buffalo in Gangetico-Ultra-Indian languages.

cow.

In some of Klaproth's Middle and North Asiatic vocabularies this important word does not occur, and I am thus without the means of fully tracing the relation between the Dravirian terms and those of Upper Asia.

1. The most common ultimate root is *pa*, *pe*, which is Tibeto-Ultra-Indian, but it appears to have been acquired by the Dravirian family with a sibilant or dental postfix, *pas*, *has*, *pet*, Singhalese *ves*. The North Gangetic and Ultra-Indian forms resemble these, *pit*, *bik*, &c *Lepcha*, *Limbu*, *Kiranti* [*ga-bhi* Bengali], *mashu*, *masi*, &c, *Chepang*, *Mishmi*, *Bodo*, *Naga* &c. The root in this form is Scythico-Iranian, *mes*, *mis*, *mus*, Perm., *misye* Wog., *mes*, *neng-mes* Ostiak. In these Ugrian languages there are distinct terms for "cow" which are also found in most of the other Ugrian and in the Tartar languages. *Mas* &c is absent

in all the Caucasian languages. In the Indo-European family it appears in the Latin *bos*, which in the oblique cases discards the postfixed definitive and restores the root *bov* or *bou* of the monosyllabic group (*bou* Anam, *woa* Lau, *nwa* Burm. *ba*, *pha* Tib.) In Semitic the Scythic term appears to enter into words for the "buffaloe," *gam-bus*, *ja-mus*. In Africa it is rare. The Gonga *miza*, *mia* &c, Kosah *maas* "cow" appear to be Ugrian. Other Ugrian terms for "cow" are common in Africa. (See Appendix to Sec. 6). As a term for buffalo it occurs in Milchanang *mosh*, *moesh*, and somewhat further modified in the Hindi *bhains*, Himalayo-Ultraiidian *moshi*, *mesye*, *moisho* &c. The original of all these terms appears to be the Ugrian *mes*, *mis*, *mus*, which in its turn, is probably the monosyllabic *mo*, *bo*, *ba*, *pa*, &c with a consonantal or final or a definitive postfix "father," "female," "male". The ultimate root is one of the common primary terms for "mother."

The Dravirian terms cannot be considered as archaic, or primary. The root has evidently passed through the Ugrian glossary. The Malayalam *payu*, Kargi *payu* may be exceptions.

2. The Telugu and Karnataka, *ava*, and anc. Tamil *a* appears to be a form of the primitive root. It is identical with terms for "mother" Drav. *ava*, *apa*, Manip. *avu*, *aphu* &c. (See also "Father" *b*). The Egyptian *ah*, *ha*, *aua*, Emghedesie *hau* are modifications of the sibilant root for "cow," and distinct from the Dravirian *a*.

3. The Karnataka *akalu* is Caucasian, *aka*, *ata* (Lesgi). The dental form of Lesgian is current in Pashai, *ada*, "bull". In the form *ta* it is a Dravirian term for "mother," *tagi*, *tali*, also with a different postfix "father," *tandoi*. The Caucasian form is Turkish (*ata*, *aga*), Ugrian and Chukchi (*ata*) "father." The same form is Dravirian with a feminine application, "aunt," "mother-in-law" &c so also Sanskrit *tata* "mother," Nias *eta* &c &c.

4. The Karnataka *dana*, *danam*, Tuda *tanma* contains one of the varieties of the same root as that of the preceding term.*

The root in both these terms is Scythic and Scythico-Iranian and the application of this particular term to the "cow" is Caucasian.

* Dr Stevenson refers it to the Sanskrit *dhen* "a milch-cow," but it seems more probable that the term is archaic and merely a variety of the root in *ta*, *ka*. The Sanskrit term I may remark is Ugrian, *tehen* Magyar.

But a similar transfer of terms is primitive or coeval with the distinctive naming of the sexes in man. All formations show that the human sexual names, definitives and flexions have been applied to animals and even to inanimate things.

Some Ultraindian and Indonesian terms appear to be connected with the preceeding root, tanga "cow" Singphu, *adangan* "buffalo" Banjar, *kidangan* "buffalo" Kahayan, daka "cow" Bisayan, *damu-lag* "buffalo" Pampangan, tom "cow" Kapui, *atom* "cow" Maram, *tyang*, *chang* "cow" Naga, *dia* "cow" Dhimal *katidung* Binua (Jakun), *tidong* Binua, Mangkasar, Wugi, *terong*, Mandhar, Tidori.

5. The base of the Tamil *karravai* a "milk cow" is more generally applied to the buffalo [See BUFFALO I.] In Slavonic the root occurs with the labial postfix as in Tamil *karowa*, *korowa*, *korne*, *kruma* &c. The Brahui *kharas* "ox" has the Dravidian root with a different postfix.

6. The Gond *mura* (Seoni and Chuparah) does not appear to be applied to the "cow" in any of the other Indian vocabularies. The Changlo *brung*, Mon *priang* "buffalo" may either be varieties of the same vocable or the Himalayo-Indonesian *rung*, with the labial pref. A similar term occurs in Sindhi, *paro*, "buffalo." The Gond form is identical with Seythie terms for "horse" which are also found in Abor, Manyak and Gyarung. [See HORSE 3, 7.] In more western vocabularies it is applied to the cow (or "*bull*" as in Slavonic, *wol*, *wul*, and English); "cow", Georgian *pur*, *pudi*, *furi*, *puri*, *kobali*, Armenian *partze*, Amharic *freda*, Tamali *plan*. It is applied to the bull in Agan *bira*, *bera*, *biri*, Gonga *bero*, Woratta *bora*, Tigre *behherai*, Hur-rur *bara*, Arkiko *whur*.

7. The Uraon *udu*, [comp. *uru*, "hog", Maldivian], Mundala *uri*, Male *oi* [from *ori* probably], and the allied Southern terms for "bullock," *yerutu* Tam., *yeltu* Karn., *yelta* Tul., are Caucasian, *ol*, *al* Lesgi. The same root is a Ugrian term for the "horse" *wol*, *wal*, *wyl*, *lo*, *lu*, *alasha*, Turkish *ulasha*, *losha*, *yelki*. The Fin *lehmä* *lohma* &c "cow" contains the same root. It is also found in Africa, *lah* Danakil, *loh* Saumali, *lam* Amharic, *lame* Tigre, *lawom* Galla, *lombe* Suaheli, *aira* Dalla. It is also Iranian, *aurochs*, *urus*, &c. As a term for "buffalo" it is Dravidian and

Ultraiadian, *irumai* Tam., *ira* Toda, *yirme* Karn., *le* Naga, *alui* Koreng, *raloi* Khoibu, *lui* Maring &c.

8. The Gond *dhoriyal* is found in other dialects with a different acceptation, *dorri* "a cow-house," Telugu, "a cattle pound," Karnataka, *totti* "a pound," Tamal, *torralu* "cattle" Telugu, *torravu* "a herd of cows" Tamal, *dhori* "cattle" Hindi, Guzara-thi, Marathi.*

9. The Kol terms (*gai*, *gundi*, comp. *kuude* "horse" Samoiede) are Arian (*gae* Hindi). Scythic languages have the root with prefixes and postfixes, but the prevalent Arabic and Indo-European forms do not appear to have been derived from any of the existing Scythic terms. They preserve the Chinese form. In Chinese the root alone signifies "buffaloe," the domestication of which appears to have preceded that of the cow, which is designated by the same term with a qualitative or descriptive root conjoined.

<i>gu</i>	Chinese,	"buffalo"
<i>gau</i>	"	"
<i>gauh</i>	Sanskrit	"cow"
<i>go</i>	Bengali	"
<i>gai-garu</i>	"	
<i>ga-bhi</i>	"	
<i>gao</i>	Hindi	
<i>gae</i>	"	
<i>ghwa</i>	Pashtu	
<i>gau</i>	Persian	
<i>kuhe</i>	German	
<i>cow</i>	English	

Horse.

1. One term appears to have prevailed in all the South Dravirian languages—*kudi*, *kudu*, *kuda*, *kud*. In Telugu it has been replaced by a N. Indian term, but its earlier possession of the Tuluva form *kuda* or Karnataka *kudu* is shown by the Indonesian *kuda*, *kudu* which must have been received from the Kalingas.

<i>kudirei</i>	Tamil
<i>kudira</i>	Mal.
<i>kudare</i>	Tulu.
<i>kadar</i>	Tod.

* All these affinities, save the Gond itself, I have taken from Dr Stevenson's "Essay on the language of the aboriginal Hindus," Journ. Bombay As. Soc. i, 115.

kuduro	Karn.
kudre	Kurg.
kotu	Andi
kooto	"
kut	Yeniseian
kus	"
kuda	Malay, Indonesian
kudu	Jav. (Kromo)
ghota	Bengali
ghotak	"
ghoda	Pashai
god	Deer
ghunt	Bokhara
kon	Ugrian, Yeniseian, Slavonic.
kunde	Samoide
koma	Japan

The Yeniseian *kut* and Andi *kuto*, *kotu*, are the closest foreign terms to the Dravirian *kud*, *kuda* which is probably more ancient in the Caucaso-Indian province in both surd and sonant forms (Afghan-Bengali *ghoda*, *god*, *ghotak*, *ghota*) than the Caucaso-Hindi *gour*, *ghora* &c., although all are variations of the same Scythic vocable, of which the primary form is *kus* "cow" and the root *ku* (Chinese, Scythico-Iranian &c. see *Ccw* 9).

The Yeniseian term appears to be a native modification of the Ugrian *kus* "cow," for *kus* bears both meanings in Yeniseian*. The Caucasian and Dravirian vocabularies have many special Yeniseian and probably pre-Ugrian affinities. Amongst the Caucasian vocabularies again, the Andi has several special affinities with Dravirian, in the lists of words I have examined. For "horse" the more prevalent Caucasian terms are *shu*, *urshi*, *shi*, *ehe*, *zcheni* &c. Scythico-Iranian), *gour* (E. Iranian, N. Indian). *Kud* is probably of more archaic diffusion than these.

As distinct Turkish, Ugrian and other Mid-Asiatic terms have found their way into Indian vocabularies, it would appear that the dominant Dravirians of the earlier Indian civilisation did not receive the horse or its name from a Turkish, Mongolian or even Ugrian tribe. The Sanskrit, Perso-Afghan and Semitic terms are

* But in a large sense the Yeniseians may be considered as Ugrians.

quite different, although they also have Seythlic affinities. It seems probable that the race which gave the horse to the ancient Indians or to India was at one period an influential one in Middle Asia, and that its movements extended to the Caucasian province on the west and to the Indus on the east.

The Dravirians could not have carried the horse to Asonesia in the Indo-Australian era, and it was probably not till long after they possessed it that their maritime art became sufficiently advanced to enable them to transport it to the islands. It is remarkable that no trace of the South Dravirian name exists in Ultraindia, although it is found in Sumatra, *kuda*, a name which has been carried by the Malays over a large portion of Indonesia. The probability is that this term was introduced directly from Southern India by the Kalingas after the ship-building period of the Dravirian civilisation commenced, and that it is of a similar age to the Malay *kapal*, "ship." The Hindi *ghora* is now the most prevalent term not only in the Himalayan but in the Ultraindian languages. Prior to its introduction, however, the Gangetic languages had another term for the horse and it appears to have been carried to Indonesia before the South Dravirian *kuda*.

2. *payima*, Tamil anc. This exceptional term appears to be an application of a native term for "cow" to the horse (see Cow 1, Mal. *pay*, Kurgi *payu*).

3. *sadhan*, *sadam* Kol, (?Gond *chuddur*), Newar *sala*, Chepang *serang*, Milchanang *rang*, Lungkhe *rang*, *rung*, Burm. *mrang*, *myen*, Singphu *ka-mrang*. This term appears to have preceded the Dravirian *kuda* in Indonesia. It is found further eastward than Sumatra in the vocabularies of all the civilised tribes. It appears to have been carried from Java to Celebes, and from both as centres to other islands. The prevalent forms are *jaran*, *jara*, *charan*, *ajaran*, *jarang*, *ajura*, *anyarang*, *nyarang*, *adala*, *ndala*.

From the distribution of these forms there can be little doubt that the North Gangetic *sarang*, *sala*, *rang*, is the original and that *rang* or *ra*, *la*, is the ultimate root. It appears to have been the term in use by the most civilised nation of the Ganges at one period, to have been communicated by it to the hill tribes on both sides, and to have been carried in the course of its commerce to Ultraindia and Java. The Indonesian forms, it will be remarked, are

direct from the Ganges like the Burman, the former preserving the prefixal *sa* under the forms *ja*, *cha*, *nya*, *nda*, *da*, and the latter adding Ultraindian prefixes (*ma*, *ka*) to the Milchanang root which is also found bare in Lungkhe.

As a term for "cow" it is used in Milchanang, lung, Tiberkad ba-lang, rak, Lepcha long, and probably also in Changlo *brung*.

The root is Ugrian, (*lo*, *lu*, *lyu* Wog., *low*, *loeh*, *log* Ostiak, *lo* Magyar), Misjejian (*uloh*), and, in combination with the sibilant root or postfix, Ugrian and Turkish, *alasha*, *losha*. It is also found nearer the Himalayas in the Horpa *rhi*, *ryi*, and Tho-chu *ro*.' As a term for "cow" the root is also Ugrian, Caucasian, Semitic, Iranian and Dravirian (See Cow, 6.)

The Abor *bure*, Manyak *bo-ro'*, *breh*, Gyarung *bo-ro'*, Samoiede *bora*, Mongol *mori*, *morin*, *murin*, Tungusian *murin*, *maril*, *moron*, *mureun*, Korean *mar*, *mal*, *mol*, and Perm *wyl*, *wal*, *wol* appear to involve the same root (*ro*, *re*, *il*, *al*, *ol*, *rin*, *ril*, *ron*, *rok*, &c.) and show that at a period prior to that of the Turkish predominance on the north of the Himalayas, tribes of Ugrian origin penetrated to India and Ultraindia, a fact placed beyond doubt by the general character of the Tibeto-Ultraindian glossaries. (See chap. 6.)

The Himalayo-Celebesian *rang*, *sa-rang* &c. appears therefore to be referable to the Tibeto-Ultraindian era of Gangetic ethnography and to be one of the large vocabulary of Asonesian words received from the Ganges during that era. The nasal is probably of Milchanang origin.

4. *tata* "pony," Tam., Telug., Karn., Beng., Hindi, Marathi, Guzarathi; *tatava* Telug., *tatarani* Karn. This is a reduplicated form of the Tibetan *ta*, Turkish *at*, *ut* "horse."

6. *gurramu* Telugu. This vocable, which appears to have superseded a native term (*kuda*), is of North Indian derivation. As it is ultimately a variation of the root of the current Dravirian term (1), I give its distribution for comparison.

gurramu

Telugu

kora

Gond

ghoro

Uraon, Male

ghora

Hindi and most of the Himalayo-Ultraindian languages, with slight variations in some.

krup	Gond ("mare")
kray, khay	Burman
kre	"
kyeh	Mon
akalui	Kasia
kuri	Naga
kor	"
korta	Changlo
ghori	Sindhi
guriri	Kashm. (Comp. kudiri Drav.)
kurra	Tirhai
gour	Misjeji
gnur	"

The term cannot be traced beyond the Caucasus as applied to the horse. But in its other Hindi application "cow", *goru*, it is Scythic (see "Cow", "Buffalo"), or rather one of the two roots in the most widely spread Scythic term *lukur*, *sagar*, &c. Probably *kar*, *kur* &c. existed separately in Scythic as in Indo-European, as a term for "horse", "cow", "hog" &c, before the compound vocable was formed. The name may have originated in the conjunction of the names of two animals previously possessed by the tribe which first used it. The prevalent Scythic form appears to be referable to the Chinese *sha—gau*, &c in which *gau* is "buffaloe" and *sha*, *sua*, &c. apparently varieties of the root for "Hog" 'chu, &c.'

7. *Perm*!, Gond, "a large horse." This word—which is probably to be found in some of the western languages of India also—is Semitic, *farkin* Mahrab, *feras* Amharic, *Saumali*, *ferda* Galla, *fars*, *faras*, Arabic &c. It must have been introduced into western India with the Arabian horse. In similar forms it is European, *fert*, *perd*, *pferd*, *paard* horse. The original broader form of Mahrab and Arabic preserved by some of the African members of the Semitico-Libyan family, *marra*, *marka*, *murtahad*, and Indo-Eur. *marsh*, *mer*, *mare*, is Scythic, *bora*, *mori* &c. The Gond postfix resembles that of the Mongol and Tungusian *murin*, *muril*, and as the Samoiède form *bora* is Gyarung, Manyak, and Abor (sec. 3) the Gond may possibly be Scythico-Ultraiidian. But the form of the root is Semitic, and the postfix is a native one.

The slender form *fer*, *per*, was probably the Himyaritic, from its prevalence in Africa.

5. The Tibberkad *shang*, *shung* [Limbu *shang-wa*, Kiranti *sau-wa*, "buffaloe"] may perhaps be added to render complete the evidence of a Ugrian derivation of terms. Samoiede *tshunda*, *tshioha*, *junka*, &c, Turkish *chen*, *dchilka* &c. But the final nasal is probably local, as in *rang*. If so the term *shu*, *sha*, may be derived from the Caucaso-Arian and Caucaso-Semitic *shu*, *sho*, *tzin* &c (Lesgian), *shi*, *che*, *ache* (Misjejian), *asp*, as Pashu, *ashua* Sansk.; *sus* Hebrew, *hasan* Gara, *hisan* Arab., *eis* Berb., *su* Mandingo, *sy* Serakoli, *haasi* Kosah. The Semitic full form appears as a root in the Latin *asinus* "ass", and without the definitive in the Celtic *asyn*, *asen*, further contracted in the English *ass* to the primary root. The Tibberkad, like the Semiteo-African forms, would appear to be more immediately connected with those of the Lesgian vocabulary (*shu* &c) which also supplied the South Dravirian *kudu*. It will be remarked that the Irano-Sanskritic form of the root *ash*, *as*, resembles the Gara *has* (=as, the Gara strongly aspirating initial *a*). The final *as*, *s*, *ha*, *h*, of the Semitic *faras* &c. may possibly be this root and not merely the definitive. In Seythie the root is rare. It perhaps occurs in the Wolga and Turkish *ala-sha*, Turkish *lo-sha*; and the Turkish *at*, *ut*, Tibetan *ta*, *tha*, *tah*, Dravirian *tatu* have probably the same root under a different form.

The primary application of this root appears to have been to the hog, Chinese *chu*, (sometimes pronounced *su*) *chi*, *ti*, *tio*, *du* &c, Turkish *susha*, *sysna*, Wolga *susna*, Fin *sika*, Celtic *su*, Eng. *sow*, Latin *sus*, Armenian *chos*, Iranian *shukar*, *sukra*, *sarka* &c *suer* &c, and its most prevalent secondary one to the cow, Chinese *sua* *gu*, *sha* *gau*, *ch'hia* *gu*, *gu* is buffalo, Korea *sio* (Ch. *tio*), Japan *usi*, *ushi*, Abor *sou*, E. Nilotic *sua*, *sua*, *osha* &c, Ugrian *sur*, *ser*, *sir*, &c, Turk. *ushkal*, *is-kal*, *sa-gar*, *chyu-kun* &c.

Words of Art.

ARROW.

The anc. Tamil *kanei* is Sindhi, Pashai, Asami, and more remotely Chinese. A more prevalent term, *ambu*, *amu*, is apparently East African also. A third term is Iranian, Tungusian

and Korian. The Brahui billa, "bow," is Dravirian, vil &c.*

BOAT.

The Indus vocabularies to which I can refer do not contain the word, and the other trans-Indian languages do not supply any term immediately connected with the Dravirian paru, pada, pan and paka.† The most remarkable fact connected with the Dravirian terms is their wide prevalence amongst the leading maritime Malayu-Polynesian tribes. Both terms are found combined in the Sanskrit playaka (also plava), a "ship,"‡ and as there is no reason to think that the separate words were Sanskrit it is probable that they borrowed the compound from the leading Tibeto-Dravirian nation of the Ganges. The same compound is found in the Celebesian padawaka which preserves the proper Dravirian form of the first term. The current Garing plava has the Sanskrit form. Both the Dravirian terms have been disseminated over the Sumatra-Polynesian islands, and their prevalence amongst all the navigating tribes of Asonesia shows that the pre-Arian nation of the Lower Ganges gave to the islanders their "flying praus", as well as the horse. The former as well as the latter belongs to the Gangetico-UltraIndian and not to the prior Malagasy era of Oceanic civilisation. The Niha-Polynesian race itself brought both from their native seat on the shores of the Bay of Bengal.

The foreign affinities of the Dravirian val, van, pan, pad, par, pal, as well as of vak are probably to be found in the archaic Semitico-African vocabularies. I do not find these terms, or pa, which appears to be the common root, in any of the Klaproth's Mid and East Asiatic lists, but it must be remarked that he only gives the term "ship" in several and that even it does not occur in the Ugrian and Yeniseian ones. The Semitic elements bur

* While this section is passing through the press I have received Koelle's *Polyglotta Africana*, which shows that the labial term for "arrow" is not confined to E. Africa and Malagasy. In addition to the African words, given in App. B I can now cite *rehon* (*pl. aban*) Mbofon, *tehan* Udom, *pea*, *pl. pema* Guresa, *ela*, *ola* &c Yoruba group, *ivan* Iivi &c; *ban*, *van* &c correspond with the Malagasy *avana*.

† The Brahui *bedi* has distinct connections.

‡ These terms are given by Bopp in his *Comp. Gram.* and are not the ordinary Sanskrit ones for ship or boat. The principal of the proper Arian roots is *nau* (*Comp. naus, navis* &c), *nauka*. It is possible however that there is a connection between *nan-ka* and *plava-ka*, and that both contain the root *nau*, *nav*, *lau*, *lav*. The Telugu *padava* may be a derivative from *plava*. Whatever may be the connection of the Sanskrit and Dravirian words, there can be no doubt as to the Indian origin of the Malayu-Polynesian *prau*, *silau*, *padawaka*, *waka*, *vaka* &c.

bul, the word *fala* and the Mandingo *bara* are in favour of a Semitic-African connection. The labial root is found in Indonesia, hap, ap Car Nicobar, bubu Nias, bu Gorontalo, bopau, vapa, kopapa Polynesian. There is also a wai series,—wai Waigui, ua [= wa] Point Dorei, oia, u Caroline, wa Mille, Tarawa, New Caledonia, pahi Polynesian, nawai Australian, but nawai may belong to the nau, rau, class. The Tongan hamma may be connected with the Nicobar hap, ap.

A	vallam	Mal.
	vanji	Mal.
	pansi	Bengali
B	padava	Telug.
	paru	Karn-anc
	plava	Sanskrit ("ship"), Gurung
	plavaka	Sanskrit
	palwa	Malay
	prau	Malay
	prahu	"
	falau	Polynesian
	velo	Viti
	baru	Bisayan
	bulutu	Goront.
	podora	Australian
C	pakada	Tam. anc
	pla-vaka	Sanskrit
	pahuk	Simang
	avauk	Pagai
	abak	"
	ofakh	Roti
	pada-waka	Celebes
	vaka	Polynesian
	waka	"
	vaha	"
	wa'a	"
	wa	"
	waga	New Caledonian, Bruner I., Louisiade.
	make	Tarawa
	bangka	Balignini

wangkang	Malay, Javan. &c.
uwang	Magindanao
wanga	Viti
wangka	"
wanagi	Redscar B.
tafanga	Polynesian
tafang	Rotuma
nuank	Malicolo
fälz	Arabic
bara	Mandingo

The root *bur*, *bul*, in the Arabic *zumbul*, *zumbur*, *Mahrah mabur*.

pensi	Aino, a "baidar."
funil	" "

The third Dravirian word for boat, *doni*, *dunga*, *dingi* &c appears to be much more modern than the others—for it has made but slight progress in Asonesia compared with them—and more modern than the E. African and Chino-Anam affinities would have led us to infer. The subjoined table shows what is evidently its true derivation. It is one of the Tibeto-Ultraindian acquisitions of the Indian vocabularies. The chain of connection between the Tibetan root *ru* and the Gangetic *dunga* through the North Ultraindian forms is clear, and it would certainly have been more complete if the vocable had not been replaced in several of the eastern Gangetic languages by the Sanskrit *nau* (Bengali *nauka*, Hindi, Bodo *nau*, Dhimal *nawar*, Lepcha *navar*, Male *nave*, Kiranti *nava*, &c.) The Karnataka *doni* and the Bengali and Scindian *dingi* show a considerable departure from the prevalent and otherwise persistent forms. The E. African *donic* &c may raise some doubt as to the Karnataka term being merely a dialectic variation of the adjacent *donga*, *dongo*. But it is probable that the word was borrowed by the Saumalis from Western Indian navigators, for it appears to be confined to them and the allied tribes. Along the east coast of Africa, in Madagascar, amongst the Zimbian nations and far into the interior of central Africa, Semitic words for "ship" and "boat" are prevalent. In Suaheli we find *jumbo*, in Malagasy *sambo* (the *Mahrah sambu*); *jahasi* in Kinika, *zahasi* in Kipokoma; *dau*, (and *mzefe*, probably

"ship"); in Galla howolo, hirmo &c, in Ki-kamba ngalawa, Ki-biau rigalawa [garab], in Woloff gal, in Yoruba okkorh, Yebu oko. The Arabic garab, ghrab, Persian kaurib "boat" is Scythic, (Turkish karap, kirap, kirek, Samoide kerep). The same vocable has been adopted by some Indonesian languages, kalaba Pagai, kraba Sumba.

The Bengali dingi cannot be a very ancient South Gangetic word, otherwise it would have been prevalent in Indonesia. It appears to be referable to the Irawadi and Kasia slender form of the Tibeto-Ultrindia root, but its presence in Scinde is remarkable, the broad donga being Hindi ("canoe") as well as Bengali.*

The Tamil (mod.) *oddam*, Tuluva *oda* may be connected directly with the preceding term, but it is more probably distinct. The Samoiede *odu*, *worga* is the closest foreign terms I have found. The Tibetan *ru*, *du* is the same root, but the S. Dravirian form is Samoiedic. Some of the Asonesian term are Dravirian more than Tibeto-Ultrindian in form *e. g.* ora Toro [= *oda* Tuluva.], ta-ta Tana.

<i>gru</i>	Tib., Takpa
<i>gu</i>	Manyak
<i>dru</i>	Lhop., Changlo
<i>du</i>	Lhop.
<i>thu</i>	Serpa, Gyami
<i>bru</i>	Gyarung
<i>malhu</i>	N. Tangkhul
<i>rua</i>	Mishmi
<i>aru</i>	Singhalese
<i>reu</i>	Lau
<i>ru</i>	" Naga
<i>rung</i>	Murung, Garo
<i>hulung</i>	Aka
<i>surung</i>	Naga
<i>arong</i>	"
<i>lung</i>	"

* Koelle's vocabularies give *olungu*, *ulungu*, as a common W. Zimbrian term for "canoe," so *aronggo* Mose. One of the most common terms is *oko*, *go*, *kokua*, *guro*, *kor*, *kulan* &c. The identity of *lungu* with a common Gangetic term is remarkable. If this form as well as the modification *donie*, *dingi* &c. was current at an ancient period on the Indus, its transfer to Africa would not be surprising.

<i>otlung</i>	Miri
<i>olong</i>	"
<i>tilong</i>	Mikir
<i>dunga</i>	Murmi, Magar, Sunwar, Kol
<i>donga</i>	Bengali, Hindi, Newar, Uraon, Male
<i>dongo</i>	Gond
<i>doni</i>	Karnat. mod.
<i>laung</i>	Lungkhe
<i>wilaung</i>	Khumi
<i>plaung</i>	" Kyo
<i>li</i>	Singpho, Kapwi, Maring
<i>lhi</i>	Maram, Rakhoing
<i>nli</i>	Maram
<i>tali</i>	Jili
<i>mali</i>	Koreng, Khoibu
<i>mari-kho</i>	Champhung
<i>malhi</i>	C. Tangkhal
<i>malhu</i>	Khoibu
<i>lhe</i>	Burm
<i>khli</i>	Karen
<i>ria</i>	Siamese
<i>kleng</i>	Mon
<i>khui</i>	Khyeng [=gru Tib.]
<i>liing</i>	Kasia
<i>dingi</i>	Bengali, Sindhi
<i>ring</i>	Garo (Brown's voc.)
<i>alina</i>	Tilanjang
<i>tina</i>	Sambawa
<i>tena</i>	Sulu
<i>in-dyn</i>	Murare ((New Caledonia)
<i>longa</i>	Tagalo
<i>tidong</i>	Kissa [Mikir.]
<i>palang</i>	Jav. (? a variation of the Dravido-Sansk. term <i>palava</i> &c.)
<i>oria</i>	Dorei [Siamese form]
<i>era</i>	Mairasi
<i>rai</i>	Onin
<i>aruer</i>	Gebe

ora	Toro (Salomon Is.)
lo	Eromango
rarna	Vate [= Gebe]
biri	Lobo
piari	Utanata
mari-nawai	Australian
mari-gau	"
mara-gau	"
war-gai	"
gul	Erub, Masid, Pt. Lihū
kuero	Vanikoro
donie	Saumali
donah	"
deuniki	Danakil
raul	Andi (ship)
adawle	Arabic "
dau	" "
worga	Samoiede
oddu	"
antu	"
anu	"
al	Yakuti

The form in *n* is a common Samoiede one, and the Indo-European *nau*, *navis* &c. appears to show that it is an archaic variety. The Indo-European word is more immediately connected with the Andi and Arabic form *rau*, *dau*. The Bruner Island *daow*, *raow* "a catamaran" is the Timor *benau*, *wenau* "boat", Vanikora *naue*, Tuanlu (New Cal.) *nayu*, "boat." The Australian *nawai* may either be the same term, or the Waigiu *wai*, Port Dore *ua* or *wa*, New Caledonian *uang*. *Dau*, *rau*, *nau* may be remnants of a once common Indonesian term of archaic Semitic origin like the Vanikoro *baito*, "a house," and many other Asonesian vocables, but the Ultraindian *plaung* and the Arian *nau* conspire to render the etymology doubtful.

The New Guinea and Australian terms may be archaic, but they have every appearance of being derivatives from one branch of the Ultraindian languages, the Manipuri and Yuma. If this be the case, they form a remarkable record of the period when this

branch furnished the maritime tribes of the Lower Irawadi and Arracan, and would tend to show that the Ultraiudian navigators of this era were the first who had sufficient intercourse with the races of Torres Strait, and the adjacent shores of Australia and New Guinea, to communicate to them the names of their vessels.

Another Oceanic term, nearly displaced like the preceding one, is also referrible to an Ultraiudian source.

koa	Tibetan
khuonkhô	Naga
khoa	"
khung	"
khombe	Limbia
kupok	Nicobar
mari-kho	Champhung
mari-khong	Luhuppa
ra-kong	N. Tangkhal
kowa	Savu
rai-koi-koi	Onin
kinung	Kissa
jong-kong	Bima, Tidori, Bajo
ja-kong	Bali, Sasak, Buol
koina	Maori [koi Onin]
kuan	New Ireland
kuere	Vanikoro
ku	Utanata
nel-kou	Aneiteum (New Heb.)
kalu, kui	Loyalty Is.
kwa	Nikete (New Caledonia)

It will be remarked that the Savu kowa, New Ireland kua-n, and New Caledonian kwa are faithful to the Tibetan and Naga koa.

To complete the history of the Dravirian maritime connection with Asonesia it may be added that the Indonesian term for a square rigged vessel, kapal, is also Dravirian, but of much later origin. It belongs to the Telugu or Kalinga era of Indonesian civilisation, like the Sanskrit element in the languages of the civilised western races. The Dravirian term appears to be a Seythico-Caucasian root with a native postfix, kapal. Circassian kap, kaf, kuafa, Turkish kuafah, Ugrian kap (Wolga), chap, (Ostiak) Tur-

kish kebe [also keme, kema, kama, gome, gemi &c.], Misjejian kema, Lesgian gyami "slip", Sanskrit kepa. Some Asonesian terms for "boat" appear to be rather referrible to the prevalence of an archaic form of this root than to the modern kapal.

kakabei	Bawian
kabbi	Erub
kabi-nar*	" " Murray I.
[kupok	Car Nicobar
kopapa	Maori]

In the last term the root is probably papa (Nias babu) Tonga bopau, ko being a common Maori pref.

Chinese terms are not found in India save in Sindhi, although they have become current in Tibet on the continental side and Indonesia on the insular. The Tibetan syen is Japanese sen, Chinese, ch'hiang, chan, siao, chiu, thiang &c. The form chan is the original of the Indonesian jong, jong-kong, whence the European "junk." The Chinese sampan is also current in Indonesia. The Sindhi jhamti appears to be Chinese ch'hiang-toi Macao. The Tibetan form has descended to Northern Ultraindia *ihseng*, *yesang* Naga. The Anam chuyen, Burman song-pua &c. are of direct Chinese derivation†.

HOUSE.

The most prevalent term is South and North Dravirian, Kol and Himalayan, in different forms.

illam	Tam. anc., Mal.
illu	Telug.
illa	Tulu.
erpa	Uraon
arra	Tol.
oarra	Gond
oura	"
ron	"
ora	Kol

* Nar is also current as a separate term in the Torres Strait dialects. It may be a variation of the Australian [Ultraindian] mari, mar, or directly Gangetic nau Bodo, nawar Dhimel, nawar Lepcha [See nau, nau &c. *supra*.]

† The Anam ding of Mr Brown's vocabulary given in App. B to chap. vi. does not appear to be a genuine Anam vocable, and the Chinese ting is a form of a different root.

ara	Kol
ou	"
uraa	"
ura	Brabui
li	Lepcha
le	"
aru	Champhung
riang	Siamese
lehu	Aru
hale	Simang, Pol.
sarin	Lobo
hari	Polynesian
ri	Rotuma [= ha-ri, ha-le, sa-rin]
alaya	Sansk.
aula	Latin
arre	Danakil
ille	Yoruba
ire	Japan
rat	Koriak
? dih	Persian, "village"

The slender South Dravirian *il*, *er*, is the Himalayan and Asonesian form, and as it is also Japanese and African, it is probably one of the primary Dravirian vocables. The broad *Tuda*, *Gond* and *Kol* form has a stronger resemblance to the Indo-European, but is doubtless of equal antiquity with the other as a Dravirian term.

The Tamil *vudu*, *uidu*, Malayalam *vida*, Male *ava* and Changlo *phai*, is found in the Asonesian *bahi Sulu*. It is probably connected with the Semitic but *Gara*, ut *Curia Muria*, bet Arab., bet Hebrew, *baiti* *Mahrab*, *abaita* Egyptian, *mitse* *Shangalla*, the *Gara* having the Tamil, and the Himyaritic (*Mahrab*, Egyptian) the Changlo forms of the ultimate root (*bu*, *be*, *bai*, *vi*). The *Viti mbeto*, *Vanikoro baito* are Semitic in form. The labial is common in Asonesia under different forms *uba*, *emu*, *ima*, *im* &c. but these may all be derivatives of *uma*, *umo*, &c., a contraction of *ruma*, *huma*, *ramo* &c. The Sunda *ima*, *Mille im*, *Sydney mya*, have some claim to be considered as an independent root. The Semitic vocable is also *Samoiede*, *mat*, *matsch*, *matu*, *met* (Arabic

bet) in which *t* is evidently the definitive or consonantal augment, the forms *me*, *mye*, *ma*, *men* also occurring. The root is also found reduplicated in *Yukahiri*, *meme*, and the *Chukchi* *mantaak* appears to be connected with the broad *Samoiède* forms. The *Koriak* *wal-charat* has the same term in its first element.

These broad N. E. Asian forms appear to be also related to the third *Dravirian* term *manei* *Tam.*, *mane* *Karn.* Like the other *Dravirian* terms they are also found in the *Semitico-African* family, *mana* *Galla.* The *Sanskrit* *balai* "a hall", which is found in *Asonesia* with the same meaning, and also with that of "house", which it has even in *Polynesian*,—*fale*, *fae*, *mare*, *vale*—and *Micronesia*—*playe* (*Pelew*),—is a cognate term.

To the *Semitico-African* form *bayith*, *bait*, *baiti*, *mitse* and the *Dravirian* *vida*, &c., the *Iranian* *vish* *Sansk.*, *bati*, *basa-sthan*, *nibas* *Bengali*, *basti* "village" *Hindi*, are allied.

IRON, SILVER.

The *African* affinities of the *Dravirian* word for "iron" are the closest, and as the common *Dravirian* word for "silver" *vili*, *bili*, is also a *Semitico-African* term both for "silver" and "iron," the *Dravirian* words for the latter may safely be placed in the same class of relations. The eastern prevalence of the *Himyaritic* form *filāt* is evinced by the *Indonesian* *pilak*, *perak* "silver" (*ber* is a prevalent *Caucaso-African* form of the root). But the *Dravirian* term does not appear to be of similar recent derivation. It has not the *Semitic* postfix, and in some of the northern languages of *India* the root occurs in other forms *amel* *Abor*, *Miri*, *mil*, *mul* *Milchanang*, *mul* *Tiberkad*.

The same root, primarily meaning "white," "light," "bright" &c., has been applied to "silver," "moon," "sun," "stars," "fire," and to "iron," "gold" and other metals. The direct application of the qualitative "white" to silver has been twofold. The primary one was to call the moon by the name "white." When that name had become a generic substantive for metal, the same root or a different one was, in some languages, again attached to the primary form as mere qualitative, "white-metal." Hence the various forms and applications in which the root is found in the *Dravirian* languages do not necessarily belong to the same era.

The *Dravirian* term for "white" is *velliya*, *velluta*, *bile*, *bilige*,

bellane &c. The root is *veli*, *billi*, *bile*, *velu*, *bola* &c. If with these terms for "white" those for "silver" be compared, no doubt will remain that the qualitative root was the original. Drav. *vili*, *bi'i*, Semitic *filat*, *filati* &c., *bir*, *berur*. In many of the African languages, as in *Kol*, it is applied to "iron," and as the root appears with the same meaning in the Hebrew *barzel*, as well as in the Georgian and Latin terms, in *Kamschatka waratsh* (the base apparently of the Hebrew *bar-z-el*), *Koriak waland*, this appears to have been a very archaic application. But it must have been a secondary one. The etymology is conclusive as to this. Silver is found naturally in the metallic state, and must have attracted the attention of man long before the art of converting ores into malleable iron was discovered. When other metals came into use, the word, in accordance with the most archaic plan of naming, would probably be applied to them with some distinctive epithet, and it would in some languages come in time to have a generic meaning equivalent to "metal." When, for example, "gold" became "yellow-metal," and iron "black-metal," silver would become "white-metal." The basis vocable might come to be applied to gold, silver or any other metal exclusively, in the ordinary course of glossarial conversion and displacement. In *Malagasy* the same root we have been examining is found with the generic meaning. Gold is "*vula-mena*," "metal-red," and "silver" is "*vula-futsy*" "metal-white" or simply "*vula*," thus showing that the earlier application of the term was to "silver." The *Malagasy* word for "moon" *fula-na*, *vu'a*, involves the same root, and carries us back to its primitive meaning "white." The current term for "white," *futsy*, is the *Agau fuchi*. In African languages the root occurs in terms for "gold," as well as for "silver" and "iron," *warka*, *wirka* *Agau*, *Woratta* &c., *wark* *Tigre*, *baru-bera* *Shankala*, *wura* *Yoruba* (the *Malagasy-Asonesian* form). In other languages also the moon has derived its name, or one of its names, from its being "white," "bright" &c. The anc. *Tamil* name is *pirei*, one of the *Telugu* names is *za-billi* and the *Male* is *bilpe*, all following the *Karnataka* form of the root (*bile* "white" *Karn.*). The *Male* name for "sun," *ber*, and the *Kol* names for "star" *opil*, *ipil* have the same root, while the *Uraon binka*, *Male bindeke*, *Tamil* reduplicated *vin-min*, *van-min*, *Toda pone-min* *Malayalam mingauna*,

Karn. *minu* are but further variations, similar to those which the root has in the North Gangetic languages, mil. "silver" *Milch*. The Sanskrit *chand* and Malayu-Polynesian *sina* are applied in the same way, the former being "silver" and "moon", and the latter "white", "radiant", "moon."

From the preservation of the root with its primary meaning and its reappearance in the Dravido-Australian family in various names and in various forms, it must be considered as belonging to the glossarial basis of the family and having its closest archaic affinity with the Ugrian *wal*, *wel* which in Dravirian are best represented by the forms *val*, *bal*; *vel*, *pel* &c. Some of the rarer Semitico-African metallic terms have the same broad archaic forms and they are also Kamschatkan. The *i* forms are variations of those in *e*, and their prevalence both in Dravirian and Semitic appears to show a secondary and direct connection. The Dravirian terms for "silver" are applications of the native root for "white". Were the Semitic derivatives from the Dravirian?

<i>White veliya</i>	'Tam. anc.
<i>velutta</i>	,, mod., Mäl.
<i>pelpam</i>	Tuda.
<i>bile</i>	Karn.
<i>bilige</i>	,,
<i>valutta</i>	Mäl. (double postf.)
<i>baltad</i>	Kurgi
<i>bollana</i>	Tulu.
<i>phulum</i>	Gond
<i>pundi</i>	Kol
<i>punda</i>	,,
<i>punia</i>	,,
<i>pandru</i>	Uraon
<i>panguro</i>	Male
<i>balih</i>	Kasia
<i>mabulan</i>	Pagai
<i>babelim</i>	Kahayan
<i>buran</i>	Solor
<i>fuluk</i>	Roti
<i>wilban</i>	Sydney (comp. Toda <i>pelpam</i>)
<i>pila</i>	Hindi

walgi	Fin
welkes	"
abyalk	Arabic
fari	Hausa
<i>Light</i> velichcham	Tam. mod., Mal.
oli	" mod.
pelch	Tod.
veluturu	Telug.
belaku	Karn.
berachi	Gond
billi	Uraon
aveli	Male
naval	Dhimal
war	Manipuri D.
<i>Moon</i> bilpe	Male
pirei	Tam. anc.
banai	Kasia
<i>Star</i> epil	Kol
ipil	"
binha	Uraon
bindehe	Male
<i>Sun</i> ber	Male
<i>Fire</i> benki	Karn.
<i>Moon</i> berra	Danak.
werhs	Tigre, Galla
fylein	Felup
vulana	Malag. Ason
vula	Ason.
bula, bulan	"
<i>Shy</i> vin	Tam. anc.
vanam	" mod
manam	Mal.
minnu	Telug.
banu	Karn.
ban	"
pone	Tod.
wau	Lungke
thang-wan	Khoib.

tang-ban	Kapwi
fa	Lau
wono	Australian
awan	Sabimba, Sambawa "cloud"
	Malay &c.
wang	Madura
banua	Nias
wang-hi	Naga
wan	Lau
ban	"

With these terms compare Dravirian and Semitico-African words for "silver", "iron" and "gold".

<i>Silver</i> vili	Tamil
billi	Mal.
billili	Karn.
mil	Milchanang
mul	" Tiberkad
amel	Abor
<i>Iron</i> merhad	Kol
merhd	"
medh	"
marhan	"
panna	Uraon
phalam	Kiranti, Magar, Chepang [Gond "white"]
per	Changlo
mpri	Singpho
maru	Tangkhul
mari	"
puruti	Utanata
wuru-sesi	Lobo
wur-sasi	Mairasi
mumu-mur	Lobo
mumu-moira	Aru
malaga	Sydney
<i>Silver</i> filat	Gara
filati	" Mahrah
filthla	Arabic

	berur	Tigre
	bir	Amharic
	biri	Galla
	biroa	Agau
	aimira	"
	ber	"
	bersh	Gafat
	birish	"
	biro	Gonga
	bira	Woratta
<i>Iron</i>	barzal	Hebrew
	bir	Saumali
	sibila	Galla
	birta	Danak.
	birto	Gonga
	beretish	Gafat
	berti	"
	beroa	Agau
	ba	Egyptian
	vi	Malagasy
	mafy	"
<i>Gold</i>	wirha	Agau
	warka	
	werha	
	wark	Tigre
	barubera	Shangalla
<i>Iron</i>	beresh	Georgian
	ferrus	Latin
	waratsch	Kamschatkan
	waland	Koriak

This close connection between words for "white", "silver" and "iron" raises the question, whether the South Dravirian term for "iron" may not come under the same category. The full form *karumbon* appears to be compound, and if *bon* be the root for "white" and "silver" (comp. the forms *bol* Tuluva, *pun* Kol. "white") *karum* is the Dravirian word for "black", i. e. the compound is "black-silver" or "black-metal." The Karyataka *kabina* has the slender form of the word for white and silver, with

kar contracted to ka. Kar-ba, irum-ba, irum-bu, inu-mu are all contracted variations, the root for "silver" preserving the broad northern forms ba, bu, mu. The allied Hausa term is formed in precisely the same mode. Ka-rufa, ka rifa iron, aze-rufa, azu-rufa "silver."* These terms are Scythico-Iranian; "silver" rupa, rupia Sanskrit, Bengali, Hindi &c; "white", accho Sindhi, asho Ugrian, bais Saumali, hathi Galla, ht Egyptian, saisa, sai, sa Khomen, howse Pelew. Pashtu has the Hausa combination ash-repe "silver." In Turkish it is found applied to "gold," asherafi. Suaheli has a similar *a* form in rapia "silver." The guttural root for "black" is Scythic, Iranian and African as well as Dravirian, e. g. kara Turkish, kala Sansk., kam Egyptian, ako Gonga. If the Hausa term be of eastern origin, the full form was probably kara-rufa or kar-rufa.

The Egyptian ht—of which the phonetic form is probably preserved in the Galla hathi and the original in the Saumali hais—was the term for "silver" as well as for "white," and the parent Ugrian root for "white" is also applied to "silver", shie Wolga, osys, esys Perm, ezst Magyar (whence se Karen, hen Khyeng, non Mon).

A common variation in the final consonant or definitive of the full form of the root, sys, brings us to our own English term which is an ancient Ugrian combination of the sibilant and of the almost universally diffused labial root, first examined above. "Silver" is a similar compound to the Pashtu and Hausa term; *ver* is the N. E. Asian, Ugrian, Caucasian, Iranian, Semitico-African and Dravirian *ver*, *ber*, *vel*, *wel* &c; *sil* is one of the forms of the Ugrian sibilant term for "white," *sirr*, *siri* Samoiede, *siro* Japan, *mairan*, *sorny* &c. Wog., *shora* Turkish, *asido* Abor, *sudu* Siŋghalese, *med* Hindi. The combination itself is Ugrian, *serembire* Samoiede. (*arebro* Slav., *silber* German, *zilver* Dutch, *silver* English, *silba* Fin). The Japanese *siro-kane* has the same word for white, prefixed to the Chinese word for silver (*gan*, *gin* &c).

The secondary application of the sibil-aspirate root to "iron "

* Koelle gives *nei-rub* as the Kandin term for "gold" (Turkish). No other example occurs in his vocabularies. *Wola*, *wura*, *wula*, *oro*, *moro* is a widely spread term corresponding with the Agau *war*. Another common term is *dinar*, *zinaria*, *dsinalia* &c. It appears to have been received from the Spaniards on the Lower Niger and thence spread to Mid-Africa (Hausa, Bornu &c.)

is now more common than the primary one to "silver,"—Chinese *het*, *thiat*, *thi*, Anam *hat*, Arabic *hadid*, (all close to the Egyptian and Galla *hathi*, *ht*, *hais*), Sanskrit *ayas*, Latin *æs*, German *eisen*, Dutch *ijzer*, Samoiede *yese*, Korea *soi*, *suy*, Tibeto-Ultraindian *chya*, *sei*, *si*, *chur*, *sur* &c. &c.; Asonesian *sua*, *isu*, *hao*; Tungusian *sello*, *selle*, *zhilla* &c.

The Dravirian terms for "silver" and "iron" appear to be at least equally archaic with the Semitico-African, and even with the Ugrian or proto-Scythic. That for "iron," while Ugrian in the ideologic basis and in the separate roots, is native as a compound. With most of the preceding words it claims for the Dravirian-speaking race a civilisation of equal antiquity with the Semitico-African and Iranian, and one which in its earlier form was probably brought from Middle Asia with the language itself.

GOLD.

Of the Dravirian terms for gold, *suvarnam* Telug. is Sanskrit (Ugrian *shiertuo* Wolga,*—the shorter form *shor*, *sor*, *son*, *sir*, *ser* &c. is much more common in Ugrian, Iranian &c. Euskarian *urna*, Latin *aurum* &c.) Chinna Karnataka is an example of the shorter form of the root, *Silong* sin. It is connected more closely with the Sanskrit and Pali *hirania*, *hirna*, Pashtu *sira-zar*, Brahui *zar*, Ugrian *sirne*, &c. than with the Indian *sona*. The Tamil *pun*, Malayalam *punnu*, is the root for "white", "silver" again, in the Kol form. In Semitico-African and Malagasy-Asonesian the root is also applied to "gold" as well as "silver". To the Semitico-African and Dravirian terms previously given may now be added the common Indonesian term for "gold" *vulana*, *fulaan*, *bulava*, *bulanea*, *bulau*, *bulana*, all similar to Indonesian forms of the same root applied to "moon", "silver", "white."

As the most simple and methodical mode of exhibiting the short glossary and its affinities as a whole, I have thrown the numerals and the 60 miscellaneous words into two comparative vocabularies;† giving under each word a separate place to every

* The root *sor*, *sol*, *son* &c. is applied in Scythico-Iranian vocabularies to the "sun" as well as to "gold".

† See Appendix to Chap. V (A and B). I have ventured to indicate the postfix by italicising it in most cases, but it is probable that I have sometimes confounded a particle with the root and more frequently marked as a postfix what is really a portion of a dissyllabic or polysyllabic root. To distinguish the roots accurately

root current for it in the Dravirian languages, and under each root the various forms it assumes, followed by an indication of the foreign affinities, so far as the vocabularies accessible to me have enabled me to trace them. In most cases these indications must be considered as suggestions rather than conclusions, materials to aid research into the history of the several vocables and not such history itself. Where the same root is widely spread in foreign vocabularies the affinity pointed out may be safely adopted as a real historical one, although the complex relationship may remain obscure, and in many cases may belong to the primary monosyllabic stage of the language. Where the particular form of the Dravirian vocable—in root elements, or in these and the attached definitive or definitives,—is found in another vocabulary, a comparatively close and direct connection is indicated. A double identity in root and definitive, in the structure of the compound, and in that phonetic form which is so liable to change,—can only be accounted for, in general, by referring the vocables to one diffusive vocabulary, or to a common mother formation. Many of the affinities noted must—from the absence of cumulative or corroborative indications—be considered, for the present, as merely phonetic. Further research will raise them to a glossarial or historical rank, or discard them as fortuitous. Although they possess no recognizable value in the present paper, I have not considered it right to omit them, because data accessible to others, or which may be hereafter published, may prove them to be real.

In the more exact consideration of the historical affinities which forms the text of this chapter I have used the Appendix as a body of suggestions only, and have not thought it worth while to point out in detail where my present inferences differ from those indicated in the vocabularies, which were compiled long ago.*

in all cases would require an intimate knowledge of the Dravirian languages and a full comparison of their vocabularies with all the others in the Old World at least.

* Considerable time has also elapsed since they were printed, and the additional materials now available, the increased facility and certainty with which a more intimate acquaintance with the structure of different families and a longer practice in the collation of vocabularies enables me to distinguish roots from prefixes, post-fixes and infixes, and the numerous imperfections I now find, would dispose me to correct the whole series, if there was any prospect of finding time to compile them

is found in the more widely prevalent *mur*, *mar* &c. (See *Head* (c)).

Hair (c.)

	orama	Kurgi*
	robong	Gond
	lom	Bengali
	[uran	Goold I.
	kiaram	Wiradurei (See <i>Head</i> c.)]
	e-nom-braem	Waigiu
	nahm	Vate
	niem	Tana
(head)	langan	Roti
"	lungga	Buol
"	lunggongo	Goront.
	[rambut	Indonesian (Mal. &c), but ram is probably a def. pref.; <i>bu'</i> , <i>buh</i> is a common root (See <i>Head</i> (d.))]

The liquid alone in various forms, *la*, *lu*, *ulu*, *ra*, *ruh*, *ira* &c is a common archaic root, N. E. Asian, Seythie, Indo-European, Asonesian.

Hair (d.)

ventruka Telugu

Hair (e.)

chutti Uraon
choti Sindhi

The root is common *chu*, *su* &c.

Hair (f.)

ub Kol
up "
pu Tibet, Horpa, Takpa
mui Manyak
upat Ostiak
opta "
up, ip Fin
bo, mo Chinese
pipe Tasmania

* Comp. *oluwa* "head", Singhal. *lohu* "forehead", Fin, *lob* "forehead", Slavonic and the common Slavonic term for "head" *golowa*, *glawa* &c, Latin *salva*, Celtic *gal*. The guttural is probably the common Asiatic *go*, *ka* &c, "head," and *go-lowa* may be a compound of this root and *loha* or *lowa*, in which the root is the widely spread *lu*, *ulu*, *olo* &c, and *ba*, *wa* the common Ugrian post-fix. But the root may be *golo* (Ugr. *u-gol*).

(head) ap Egyptian

" api

"

The ultimate root is the same as bu, pu &c, "head," and the Kol ub may be merely a variation of bu [See *Head* (d)].

With reference to the vocables given under *Head* c and d and *Hair* f, it should be remarked that the forms in mt, ms, bs, &c. are more commonly used for *face*, and *eye* than for *head*. The labial root by itself and with the same range of finals -t, -d, -n, -r, -l, -th, -s, -h, -g, is also applied to *Face*, *Cheek*, *Mouth*, *Lip*, *Nose* and *Ear*. Examples of the simple labial root,—*Head*, pa, awa Ugrian, ap Egypt, bu Kol, plu Mikir; *Hair*, bo, mo Chin., up, ip Ugrian, pu Tib. &c., ub, up Kol; *Cheek*, ma Anam, pa Burm., fi-fi Malag. (pi-pi, pa-pa &c., Ason.); *Mouth*, af Tigre, ma Shangalla, va-va Malag. (fa-fa, vi-vi &c. Ason.); *Lip*, mui Anam (bi-bi, wi-wi, &c. Ason.); *Nose*, pi, phi &c. Chin, pui, pue Sam., ut Galla, mu Besis; *Ear*, mi-mi Japan; *Eye*, mey Japan, ma' Chin., wa Dalla, me Tounghlu, mhe Bongju, mi Singfu.

For *Face* Chinese has mien, min, men, bin, ben, (comp. *Head*, Turkish benys, Ost. wanin, Singfu man, Hind. munh, Ugr. Celt. Eusk. pen, Hind. Beng &c. man, mud, mur; *Hair*, min Chepang; *Cheek* ping Milchanang, mingmo Abor, minong Hailam, pinga Kayan, ping ping Iloko, weng, Kissa, fi-fi Malag., pipi Indon.; *Mouth*, mieng Anam, minoe Nicobar; *Lip*, bir Japan, pin-yaing Yenis., minü Nicob. &c.); Fin muoto, Japan omote, Ugr. wonda, Kashm. buth, Anam mat, Pol. mata (comp. *Head* mata, muda, &c. &c. common; *Mouth*, mhuta, musu, mocha &c.; *Nose*, mondu Turk., munta Ho); Turkish bit, pit, mes &c., Simang mid, Anam mat, Celtic wis &c., Eusk. bisaja, (comp. *Nose* pi' &c. Chin., pit Torres St., petyni Aino; *Lip* pite Sam., mit Torres St., pediei Telin-ga; *Head* bash, pus &c. Turk., api Maram; *Hair* obit, upat Ugr. ipr, apt, opt Sam., mas Arm. &c.); Dravirian mukhu, muka, mokam &c. Indon. muka (comp. *Cheek* bucca, бага, bhog &c.; *Mouth* mukya Pali, mocha Kol, bocca, focco, bouche &c. Indo-Eur., pak Siam; *Nose*, muku Drav., muk Simang, boka Woleff; *Lip*, meka Bongju, amga Tungus., makub Tib.; *Head*, abak Pont. wokbok N. Aust.; *Hair* bok &c. Ultraiudö-Ason).

For *Mouth* Scythic has aman, amun-yak, Indo-Eur. mund, mant, mouth, mutte, munnur, &c.; Kol mocha, Sindhi wat, Kambojan

mat; maru Limbu, wullao Gond, mur Manipuri D., mamus Kap-wi, mieng Anam, abong Lepcha, pan Mon, ban Simang, peng Baisi, bangso Lamp., Komr., abana Sumba, manga, mangai Pol.; mothong Chepang, mbutu Newar, mathu Maram; Asone-ian, montong Meri, montong Banj. The labio-guttural form is also Seythic—*amga*, Tung.; Indo-Eur.,—Sanskrit, mukh, mukya, Bengali bak-tra, Latin faux (faucis), “the jaws,” bucca “the hollow part of the cheek”, Span. foco, Port. bocca, Fr. bouche; and Ultraiudian,—pak Khamti, pak-obu Kar., m’kha Kyou, awkang Silong. The Malagasy mulu, muluts, mula-buru &c. (and Asonesian mulut) may either have the labial root or the liquid. In the latter case it is probably a derivative from the Zimbian *mlumu*, *umlumo*, *mulumo* &c. The *l* root is Seythic ul, lul &c. The Zimbian *lamu* resembles the Asonesian lawo, lama lida, Kumi lbaung, Limbu leba, Abor nepang, Sansk. lapanam. The same root is used for *Lip*,—Galla luf-luf, Kosab lebi, Hind. lab, Lat. labium, labrum, Germ. lippe, Eng. lip &c. The ultimate labial root is used for *Mouth* in Seythic,—am, im, um, &c. Ugr., ama Mong.; Semitic-Libyan,—ma Shangalla, afa Dankali, af Tigre, of Saumali; Ultraiudian,—ba Kayan. The duplicated labial root is common,—meso Samoiede, momo Suaheli, vava, vave, Malagasy (in Asonesia fafa, baba, bibi, vivi, bafa, wuwa, buwah, bua &c. &c.) The Dravirian bayi, raya, bai, appears to be connected with the Ugrian radical forms.

Most of the other preceding terms are also applied to *Lip*, *Cheek*, *Nose*, *Eye* in different vocabularies. Thus for *Lip* Seythic has amun, mon, emga, amga, pite; Dravirian pedivi, Erub mit, Anam, mui, Japan bir, Indonesian bibir, bibi, wiwi &c., Australian mundu, mudol, wiling, Malagasy mulutu &c., Nicobar minu, manoey; and for *Cheek*, Malagasy has fi-fi (Asones. pipi, papa &c.); Burman pa, Anam ma, Latin bucca, Galla hoko, Kaili бага, Erub bag, Latin mala, Indones pili, plis, paling, banga, bongi, pingi &c. For *Nose* phi, piti, pit &c. and mu, mui, buru, muru mondu, murh, muku &c. are common. The Chinese phi, pi, &c. corresponds with the Samoiede *pire lip*, Aino *potyni nose*, and the Torres St. *pire*, *piti*, *piehi nose*, and *mit lip*. The Samoiede *pui*, *pue*, *puiya*, *piya* &c. corresponds with the Anam mui, Nancowry moi, *nose*.

The whole series is reproduced in the vocabulary for *Eye*, I,

Sec. 12. RECAPITULATION AND INFERENCES.*

IN our present enquiries we cannot go back to the period when there were no languages in India and the adjacent countries, or when some of the present great formations had not yet come into existence. We must reason on the phenomena which Southern Asia has presented to human observation since any permanent records of it began to be kept. As far as observation can carry us into the past, this region has always presented several races and formations as at present, and tribes and languages belonging to different races and formations have always been more or less intermixed and subject to change from mutual influence. In those human eras into which ethnic research has hitherto extended, South West Asia and Asonesia, considered as one continuous province, have been contemporaneously occupied by, 1st, archaic Indo-Australian, 2nd, Papuan, 3rd, Tibeto-Chinese or Ultraiudian, 4th, Dravirian, 5th, Scythic, 6th, Iranian, and 7th, Semitic races and formations. In all historical times we find several of these intermixed in the same territory and influencing each other. We also find that at different historical eras each of the three last has become expansive or migratory. Irania from very remote antehistoric ages appears to have been occupied by these three races, at an earlier period by the 4th also, and probably at a still earlier by a race akin to the 1st. Hence in later eras each of the three last must always have been more or less subject to mutual influence. In the same manner the peoples and languages of India must have been exposed, throughout these eras, to the influence, in different degrees, of the three races of Irania or of the predominant one. In great periods of archaic time the language and race of the most dominant or diffusive people of Irania and India probably varied, as it has done in historic eras. Nor, in our endeavours to obtain some firm footing in the archaic world, must we overlook the mere possibilities arising out of the distribution and character of the great races. Scythic, Semitic, Iranian, Semitico-Iranian, Scythico-Semitic, Scythico-Iranian or other mixed formations like the modern Indian, may have successively prevailed in

* See Sec. 10 for summary of the comparative structural characters of Dravirian.

Irania. There may have been Semitic or Iranian tribes speaking Scythic dialects or Scythic tribes speaking Iranian or Semitic dialects, and each influencing the ethnology of India. This peninsular region being open on the Iranian side, it is probable that it, also, in all later eras, has been occupied by more than one race and linguistic formation.

So far as we know, there never was a period when any one of the great formations existed in S. W. Asia in a completely isolated position. Each, so far as we can trace it, has always been surrounded by other formations. In every considerable ethnic revolution and movement of archaic times, as in the Brahminic, Medo-Persian, Scythic and Arabian conquests of historical times, tribes of distinct races must have come in contact, one race predominating or at least maintaining its position in the lands of others by its superior power. Wherever the nature of the country caused actual contact and intermixture, assimilation must have begun. One race might change its language sooner than its physical character, or *vice versa*. In mountainous countries and wide steppes, isolated or nomadic tribes under favorable circumstances would retain their native formation, even when subject to a foreign race. Hence immediately to the north of Irania there have probably always been wandering Scythic tribes in the later eras of human history, although their territories have been embraced in Semitic or Arian dominions and even been contemporaneously occupied by an Arian or Semitico-Arian people. But in fertile river basins inhabited by fixed industrial communities, an intrusive dominant people cannot remain pure, much less can the native and the introduced linguistic formations be preserved unmodified. Wherever, in the ethnic revolutions of Irania and India, two races and formations have come permanently in contact under such circumstances, mixed tribes and dialects must have resulted. The connected province formed by the basins of the Indus and Ganges must have been the seat of settled and civilised populations from the time when agriculture and villages first existed in Irania and India, and it is probable, therefore, from the natural attractiveness of a large portion of that province, from its enervating and demoralising influence on its successive occupants, and from the permanent existence in the countries to the N. W. of more robust nations, that the formation

of hybrid races and languages has been a standing characteristic of its ethnology. The same remark is applicable to the more open and fertile tracts of Southern India. Grant that fixed industrial populations existed in these countries prior to the later movements of western races into India, and the gradual modification and even transformation of the principal Indian languages is a necessary consequence. Glossarial facts prove that the Indian tribes were settled and civilised prior to the Arian era, and as the pre-Arian arts were derived from different sources, and indicate the lapse of a long period of civilisation and of intercourse with foreign races, there was room for a repeated production of hybrid formations before the Indian languages acquired the forms which they now have, and which, in their turn, will prove the foundations of new formations, if they are not entirely replaced by foreign ones.

The relation of the Dravirian physical and linguistic formations to these of the provinces around India is the first point to be considered in an attempt to ascertain their true ethnic affinities. The Chinese, Siamese and Mon-Anam nations differ essentially from the Dravirians in person, in language and in other respects. The North Ultraiadians and the Tibetans are very remotely connected with them. Physically, both are purely Turanian and their languages, although of a similar fundamental type, are at a great distance from the Dravirian both in ideologic development and in phonology. The phonetic difference is so great as of itself to prove that the Dravirian formation was not derived from the countries adjoining the Indian peninsula on the east and north while these were occupied by the Tibeto-Ultraiadian. It is also improbable that it was derived from Upper Asia through Tibet and the Himalayas, because there are no grounds for supposing that the Tibeto-Chinese race are not the oldest occupants of these countries, and any ethnic movement on so great a scale and so prolonged, as to diffuse a harmonic phonology like the Dravirian or Draviro-Australian over that barrier region and thence over India, would have left traces of its presence distinguishable from those which mark the comparatively modern intrusion of Scythic languages. The affinities between Draviro-Australian and Tibeto-Ultraiadian, considerable and fundamental as they are, appear to be referable to a stage of the former long preceding its harmonic

development and its spread to India, and to be only less archaic than those with Chinese. The physical and mental characters of the Chino-Tibetan races who have immemorially and aboriginally—as far as that term may be applied to the human tribes of any region—occupied the lands that bound the plains of the Indus and the Ganges on the north and east, forbidding us to seek further in these directions for the fount of the Dravido-Australian alliance, and its various linguistic developments being far advanced beyond the Tibetan, Chinese and Mon-Anam, and in a direction similar to that of the great harmonic alliance of Asia, we must look for the immediate source of the formation to the basin of the Indus. This province is chiefly connected with S. W. Asia in two directions,—in a northern, through the head of the basin in Balti and the Hindu Kush, and in a western, where it is conterminous with Affghanistan and Beluchistan. The Dravirian formation, according to every ethnic probability, must originally have been an extension of a similar one that prevailed in this region, or at least some of its principal and distinctive elements must have been derived from a formation so located. There are several objections to our considering the head of the Indus as the main direction in which the Dravirian formation was spread to the south and east. It is quite possible and even probable that Balti was not Tibetanised until a comparatively recent period, and the previous population, or rather the pre-Arian, may have been an extension of the adjacent Scythic race, to the northward. But this race, in all its Mid-Asiatic varieties, speaks purely Scythic languages and such languages could not have originated the Dravirian. They might certainly have supplied one fundamental ingredient, but some of the non-Scythic characters repel us from attempting to trace the history of the formation exclusively in the great Scythic field, and direct us to the western province between the Persian Gulf and India, which, in a wide sense, may be termed Irania, for there is no distinct geographical or ethnic division between the eastern and western portions. In this province and that immediately to the north of it as far as Transoxiana, two races and two linguistic formations have prevailed from remote antiquity,—the Iranian and the Scythic; but a third race, the Semitic, immemorially located on the western confines of the province, has also, both in archaic and historical times,

exercised a great ethnic influence in it, while a fourth, with claims to at least an equally ancient occupation of the N. W. mountain boundary of the Caucasus, has intimate linguistic affinities with all these formations.

In later historical times the Scythic race has chiefly predominated in the north and occasionally in some portions of Irania also. The present Scythic tribes appear to belong mainly to the great hordes of Tartar invaders—Turks and Mongols—who, in comparatively recent ages, have occupied the region between China and the Caspian, intruding into Tibet and Irania, but their numbers and the extent and duration of their Indian domination were not such as to produce a marked impression on the Dravirian languages. In earlier historical times the Iranian race, civilisation and linguistic formation appear to have been exclusively predominant over Irania, and this supremacy must have endured for a considerable period, because it embraced an unbroken belt from the Black Sea to the mouths of the Ganges; while its spread over Europe is an additional evidence of its having, for the time, prevailed over the Scythic or Turanian hordes and thrown them back on Upper Asia. To this race the present Arian and Arianised nations of India, the Affghans, the Beluchis, and the wide spread Persians or Tajiks mainly belong, although a Semitic element is found in most.

The history of the race in its Irano-Gangetic province evidently involves at least two great diffusions. Of the oldest the languages and nations of India preserve the only distinct record, with the exception of the Sia Posh. From the position and character of the latter and the general distribution of the Indo-European formation, it is probable that the Arian sub-formation preceded the Persian in Eastern Irania, and consequently that dialects akin to the Sanskrit prevailed there at one era contemporaneously with the older languages of the land.

The Arian formation partially transformed the phonetic and ideologic character of the prior Dravirian languages of northern India and displaced the greater portion of their vocabularies, producing the present hybrid tongues from Guzerathi on the west to Bengali on the east. Its influence on the Vindyan and Southern branches began later, and although it has been continued since

Sanskrit ceased to be spoken, it has only very slightly affected their phonology and ideology; but its glossarial action has been considerable.

At a period subsequent to the advance of the Arian tribes from Irania into India, another branch of the same race appears to have been modified both physically and in language, institutions, religion and the general character of its civilisation, chiefly in remote ages through the influence of the great Semitic nations of the Euphrates but also in later ages through the eastern spread of the Arabs. This branch was ultimately diffused over all Irania and the Turanian countries adjoining it on the north. As far as the Indus the Semitic physical type, and the Zendic or Persian linguistic form, are strongly marked. Through the widely spoken Hindustani the latter has, in modern ages, gained a considerable glossarial and phonetic diffusion in India. In the Zend phonology the Semitico-African element is strongly marked, and this is one of its most fundamental peculiarities when compared with Sanskrit. This sub-formation does not appear to have influenced Dravirian.

The physical character of many of the Dravirian tribes and castes, and perhaps some of the traits of the language, point to a still more archaic diffusion of the Semitico-African element to the eastward. The modern or western Iranian idiom has also become that of some Scythic tribes of eastern Irania. But there is strong evidence that prior to the great eastern advance of the Indo-Germanic race, large portions of Irania were occupied by dominant Scythic tribes. The Iranian languages themselves, in phonology, ideology and glossaries shew, when they are compared with the only other formation spoken by a kindred race, the Semitic, that the Scythic formation, or formations akin to it, had been extended into Irania at a period coeval with the development of the Iranian linguistic type itself. It is possible that some of the northern Scythic tribes of Afghanistan are pre-Iranian, and there seems no room to doubt that one of the southern, the Brahui, is a genuine representative of the pre-Arian population of S. E. Irania or Beluchistan, as the Jats appear to be of the lower Indus. The Brahui physical type is Scythic, and the language has some strong Dravirian affinities in glossary although it is probable that the grammar has become Iranised. The other voca-

lularies of eastern Irania and the Indus, whether spoken by Semitico-Iranian, Indian or Scythic tribes, have also a considerable number of non-Iranian vocables that are Dravirian and in many cases Scythic or North Asiatic also. The Dravirian forms sometimes resemble those of the Indus and east Iranian glossaries more closely than the Scythic. From this it may be inferred that they were received into India through the pre-Arian languages of the Indus, because the advance of the Indo-European race into Eastern Irania and India must have cut off the further diffusion of the native vocabularies to the eastward, and arrested the regular flow of Scythic words into Irania and thence into India. We may conclude that the Scythic element of the ancient Indian tribes and languages was immediately received from eastern Irania at a period when it was mainly Scythic. But the Semitico-African element both in Dravirian and Iranian requires us to believe either that the pre-Arian Scythicism of this province was mixed with Semitico-African ingredients, or that it was, in its turn, preceded by formations of a more archaic character, having fundamental affinities both with Scythic and Africo-Semitic. In pre-Arian India the Africo-Semitic physical element must be the most ancient, because it is chiefly marked in some of the most southerly tribes and is found also in Australia and amongst the Papuans. The more decided or pure Scythic character of the Brahui and several of the ancient Indian tribes of the Dravirian formation must be referred to a later era when the Scythic race prevailed in eastern Irania. The partially Africo-Semitic basis of the Dravirian race and languages and of the Australian must belong to an east Iranian formation prior to that represented by the Brahui. While therefore the latter affords one strong reason for believing that the more recent and predominant Scythic element of the Dravirian tribes and languages was derived from the west and not from the north, the commencement of the Semitico-African formation immediately beyond Beluchistan and the immemorial existence of the Iranian in Irania, justify the conclusion that those typical physical and linguistic traits of the Dravirians which are not Scythic but rather African, Semitic or Iranian were received at a still earlier period from the same province.

The Draviro-Australian alliance, when considered in its pre-

Arian condition, differs so much in its several developments, and there is so great a break between the Indian and the Asonesian forms, that we can only consider the Arian as one of the latest and most partial of the intrusive elements that have modified the Indian branch. Between the Australian condition and the proper Dravirian, or that which immediately preceded the Arian, the interval, whether measured by physical, linguistic or mental and industrial change, is very great, and its Indian history must have been complex. It probably began with negro tribes and proto-Scythic languages like the human histories of Asonesia and Africa, while its later eras were marked by the predominance of advanced Scythic, Semitic and Semiteo-Scythic races, and by the influence of Semitic and Scythic languages. The great and archaic Scythic movements that appear to have preceded the proper Semitic in S. W. Asia, and are so deeply impressed on the Caucasian and African languages, were felt in India also and through it in Asonesia. The early Caucaso-Semitic movements which proceeded the historical Semitic, and must have been associated with the civilisations out of which the Egyptian, the Babylonian and the Phœnician grew, have left their impress on the Dravirian languages as well as on the Nilotic and North African, and the partial approximation of the Dravirian physical type to the Semitic, with the civilisation the Indian nations had attained prior to the Arian era, need not be sought in any remoter cause. There is no reason to suppose that the influence of the Semitic race and civilisation on the Dravirian has ever been wholly interrupted since it first began. When the Arians broke through the connection which in all probability previously existed by land, it is not likely that the maritime intercourse between the Semitic and the Dravirian ports was interfered with. The Dravirian formation is so archaic that not only all the great historical ethnic developments of S. W. Asia, but the first rise of the Semitic power and civilisation, and all the later movements and revolutions of this region, including the Indo-European, must have taken place in its presence. Its history goes back beyond the beginning of the civilisation of the Euphrates and the Nile, and much that distinguishes the Dravirians from the Australians may associate itself with the most archaic and as yet

undefined periods in the gradual progress of the Semitic, Caucasian and Iranian tribes from a barbarism more than African. The general character of the Indo-Australian formation proves that in the most archaic era to which the positive ethnology of S. W. Asia can as yet ascend, the Seythie linguistic element predominated in Eastern Irania and India. But whether a Seythie or an Africo-Semitic race and formation was the oldest of all, or which was the older of the two, in this region, is not clear. The early extension of the Semitico-Libyan or Libyan formation over the great outlying region of Africa, its undoubted Asiatic derivation as evinced by its Caucaso-Seythie affinities, its fundamental proto-Seythie traits, the character of the purer African physical type, and the presence of a similar element both linguistic and physical in the Dravido-Australian family, render it probable that Libyan races and languages long preceded the Dravido-Australian in S. W. Asia, and mixed with the intruding and dominant proto-Seythians who introduced that formation. The Egyptian stage of the Semitico-Libyan formation is cruder than the Australian stage of Dravido-Australian. It is nearer the Tibeto-UltraIndian and Chinese developments. Australian has much of the advanced proto-Seythie development which predominates in the American, the Zimbian, and the Euskarian formations, and is only less prominent or more modified in the Indo-European, Seythie and Caucasian. Egyptian shows that the Semitico-Libyan mother formation had separated from the great trans-Chinese stock of Asia prior to the attainment by the latter of a highly agglomerative and harmonic phonology. It spread to the south west, took possession of Africa and long remained faithful to the archaic West Asiatic type, while in Upper Asia that type changed, and gave rise to various higher phonetic formations, including the early Indo-Australian. That formation stands in its origin at a great distance behind the Indo-European and even the Ugrian, but the early Semitico-Libyan goes back for its origin or point of divarication to an era far beyond the Indo-Australian. The latter distinctly associates itself by its phonology and structure with an archaic condition of the Seythie development, Semitico-Libyan with a condition of the Mid-Asian development between Chinese and Seythie. In this early or Seythico-Libyan stage it is probable

that languages of the oldest Libyan type were not confined to the S. W. extremity of Asia and to Africa, but extended eastward along the northern shores of the Indian Ocean, and may have preceded the Dravido-Australian on some portion of the line along which it advanced to India.

Be this as it may, the history of the Dravidian linguistic formation is far from being fully elucidated by a comparison of it with the other formations of S. W. Asia,—Tatar, Iranian, Semitic and Caucasian. It is not closely related to any of these, and its more fundamental affinities with them, large as they are, go back for their sources to older developments, embracing a still wider range of formations. The individuality of the Dravidian formation, the impossibility of subordinating it to any of the S. W. Asian formations, and its great antiquity, are illustrated by the fact of its archaic prevalence in a cruder condition in Asonesia. When the characters of the present predominant formations of Ultraindia and of all Asonesia save Australia are considered, Dravidian appears to stand out from the Iranian and the Tatar as an older S. W. Asian formation, which has survived great changes in the distribution of races in Southern Asia, and which by the crude form it retains in Australia, proves that the more Iranian and Seythie character it has received in India was superinduced on a native basis of independent origin. The earlier S. W. Asian history of Dravidian, when thus viewed as a prior formation to Iranian and Seythie in Irania and India, is hardly capable of being traced, because there no longer remains any formation which can be considered as the ultimate or native one and as the limit of our researches in this region. We can ascertain affinities with other and more distant formations, but these will not supply us with all the elements of the ancient linguistic history of the Irano-Indian. When the actual barrier languages on the west are removed, we no longer have any clear guide to the archaic limits or movements of Dravidian. It may have been developed in Irania or India from a type still cruder than the Australian, or, as is more probable, it may have been derived in its Australoid type from a distant land of origin. When we go beyond the Tatar and Iranian and come to the allied Ugrian languages on the north and east, and to

the Caucasian on the west, we find strong Dravirian affinities, and it has others with the N. E. Asian languages and even with American which appear to belong to a proto-Seythie development. The languages of China and Tibet on the one side and those of Egypt and Africa generally on the other, show that the intermediate region must have undergone great linguistic changes before even the earliest variety of Indo-Australian was introduced or formed. From Tibet and Egyptian—the salient members of the old formations on the two sides of the Irano-Semitic region—to Draviro-Australian, the phonetic advance alone is so great that it necessarily implies a succession of formations, although it does not follow that they were developed in this province. The Draviro-Australian phonology is archaic Seythico-African and not proper Seythie, Semitic, Iranian or Caucasian. The ideology is mainly Seythie of a very archaic character, or rather proto-Seythie, for it is not merely a branch of the Tatar or even of the Ugrian. The connection is through an older and more Americo-African, Caucaso-Semitic, and Iranian form of the inversive development, and through that form in one of its early and crude stages. Iranian in its basis is more closely akin in some respects to Ugrian than Dravirian, the pronouns for example being the same. Dravirian again has special Caucaso-Semitic and Caucaso-African affinities. The conclusion appears to be that it was a form of the proto-Seythie or harmonic and inversive development that preceded not only the Tatar but the Iranian and the allied Ugroid Seythie in Irania, and from its archaic character and early migration to the south west of Asia and thence to India and Asonesia, had independent relations with the Caucasian, the Semitic and the proto-Iranian on the one side, and with the proto-Seythie languages of Middle and Northern Asia on the other. In one point of view it is the oldest and earliest formation of the Seythie class that is now extant, its position in Asia and Asonesia combining with its general character to prove this. In another point of view it is a distinct and more ancient formation, but of the same development.

The glossaries by themselves afford considerable evidence that the Seythie or proto-Seythie formations that prevailed in S. W. Asia, spread into Africa and India, and affected the vocabularies

at least of the Caucasian and Iranian languages, long before the Turks and Mongols advanced from the remote east, were allied to the Ugrian, Samoiede, and Yeniseian. If the Caucasian and Ugrian vocabularies yield strong evidence of the two formations having been not only archaically connected but in contact in periods long subsequent to their first development, the Dravirian vocabularies preserve proofs of a similar connection and contact with the Caucasian and the Ugrian, while their direct Chinese and N. E. Asiatic affinities point to a more eastern mother-land than Irania or any other portion of S. W. Asia. If the evidence of language may be trusted, the Dravirians were one of the oldest nomadic races who advanced from Upper Asia to Irania and India. The character and position of the Semitic-Libyan formation and of the African tribes renders it probable that the Draviro-Australians found formations of this kind established in S. W. Asia, and that by mixture with them the Semitico-Libyan traits of Draviro-Australian were acquired. The pre-historic revolutions, combinations and amalgamations amongst the nomadic hordes of Asia, probably present too complicated a subject to be unravelled by ethnology. The languages of India have affinities not only with all the Turanian formations, but with the Iranian, the Africo-Semitic, the Tibetan and the Ultraindian. To read the ethnic history of India we must first decipher that of Asia and Africa in its leading incidents, for the Draviro-Australian formation strikes its roots into the Chinese even more deeply in some directions than the Scythic languages. All attempts to trace the Dravirian formation to its ultimate sources must be illusory, because its antiquity is obviously so great that from the time it existed in its earliest development to the era when it assumed the form it now has in the principal languages of the South, there must have been a gradual extinction of many cis-Indus dialects and languages in which successive varieties of the formation were evolved, and of many trans-Indus ones which illustrated the formation in its pre-Indian history and development, or were instrumental in producing changes in it subsequently. Between it and the adjacent formations there is a great break and even the chain of connection with Scythic wants many links. On the whole, we must be satisfied with the conclusion that, strong

as its foreign affinities of all kinds are, the Dravirian formation cannot be considered as a branch of any existing Asiatic or African one. It stands by itself like the adjacent Iranian system, and represents the most ancient form of language which can be recognized in India. Its extreme antiquity in this province is proved not only by the nature of its affinities to other languages of Asia and Africa, but in a still more striking manner by those with the most archaic formation of the Indo-Pacific islands, now best preserved in Australia, although even there greatly modified. The prevalent formation of Southern India is probably that modification of the Indo-Australian type which characterised the language of the most civilised and powerful nation of India in the era anterior to the intrusion of the Arians and also, in all likelihood, to that of the Turanian tribes of Ultraindia and Tibet. The basis of the Australian is probably one of many varieties of the same formation which were formed at a much earlier period when the Indo-Australian race spread over India, Ultraindia and Asonesia. It may be concluded from the facts mentioned in Chap. II that the Australians have, in a great degree, retained the physical characters of this race, and the barbarism which still distinguishes many other insular tribes, the Simang of the Malay Peninsula, the Andaman islanders and some of the more sequestered tribes and degraded castes of India (including Ceylon) can leave little room for hesitation in adopting the opinion that the Ultraindian and Indian race, whose migrations gave the earliest known population to the eastern islands, had not advanced beyond the Australian grade of culture when these migrations commenced. It may be doubted whether the Celtic or earlier diffusive branch of the Iranian stem had itself attained a higher grade when its western movement began. Those tribes who were most remote from the later Semiteo-African sources of civilisation, such as the insular Britons, continued to the age of the Roman invasion in a state of barbarism in some respects more degraded than the Australian, or the lowest Dravirian or African. If the Dravirian formation prevailed in India at a period when its tribes were similar to the Australian in character and civilisation, it must have been a widely diffusive one before the rise even of the Tatar nations. This is consistent with the relations of Dravirian to the Seythic

and other harmonie Asiatic formations. In phonology, ideology and roots it is more closely connected with Seythie than any other formation, but as it has affinities with remote N. E. Asiatic and with African languages, it is associated with a period of the Seythie development in which the proper Tatar hordes had not yet overspread middle Asia, and when the general civilisation of the world was perhaps not above the Australian level.

In some respects the Indo-Australian formation, although more akin to the Seythie than to any other, goes back to an era prior even to the events in which the present Seythie development originated. It connects itself also by some fundamental traits, as well as glossarially, with the non-Seythie alliances of S. W. Asia, particularly with the Caucaso-Semitic. The pure phonology is more harsh and less harmonie than the Seythie and African. The distinction of sex in the pronouns is Iranian and Semitico-Libyan, and the pronominal roots themselves have not been derived from a distinctively Seythie source. If the immediate mother tongues both of the Indo-European and the Dravirian formations originated in Irania, the latter should naturally have more intimate affinities, whatever their age may be, with the former, than the remoter Tartarian languages, in other words it should be the most Arian of the inversive languages. In examining this point it must be borne in mind that the Southern being the most distant of the Indian languages from Irania, would probably possess fewer traits in common with the proper or later Arian tongues than those of N. W. India.

It may be concluded that the stock from which the ancient Indo-Australian tribes were derived was not Seythie, at least in the current sense of that term. All the ethnic facts favour the opinion that the race was, in its era, an influential and diffusive one of S. W. Asia, whence it extended itself into India as the Arians did at a later period in the history of the world. It is possible that the protoplasmic Indo-Australian race is older in India than the linguistic formation, but there is no reason to think that this is the case. At all events it seems hopeless to attempt to grope our way back beyond the Australian era. The basis of all historical inference must be the fact that the oldest race and linguistic

formation of India were akin to the Australian. We must conclude that before the rise of the historical Scythic nations a similar formation was predominant over a large province in Asia, that it extended to the shores of the Indian Ocean, and while located in S.W. Asia was there modified by contemporaneous formations of an archaic Caucasio-Iranian and Caucasio-African character. The Scythico-Semitic character of the Indo-Australian formation is consistent with that of the race itself, which is at once Africo-Semitic and Mongoloid but the former more than the latter. The physical type became in large degree southern although the language retained a northern form. How such a change can be produced is explained by many examples. In much later times the Turks, a pure Scythic race when they entered the S. W. province of Asia, have acquired an Irano-Semitic physical type while retaining a Scythic language. That successive families of the Dravido-Australian race were also dominant before the rise of civilised Caucasian, Semitic and Indo-European tribes in S. W. Asia, is proved by the very fact of their having been able to migrate over the extensive and continuous Dravido-Australian region and from a more northern land without being cut off or absorbed on the way by more powerful tribes. When such a race sent forth the great swarms of men by which India and Asonesia were first peopled, the progenitors of the existing S. W. Asian nations must have been inferior to them in power. The Turanian movements to the southward, which commenced so early as to modify the languages of the oldest known tribes of Africa, India and Asonesia, must have continued as the general civilisation of Asia increased. The Dravidian languages when compared with the Australian afford strong evidence of this in the numerous terms of Asiatic civilisation which they possess in common with Scythic tongues and which are absent in the Australian vocabularies. The subject is elucidated in another place, but it should be remarked here that the Dravidian affinities with the Asonesian languages are not confined to the Australian, although the most archaic and fundamental are chiefly found in the latter. It should also be observed that the Australian and other Asonesian affinities of the ancient Indian languages extend to all those that still remain, and are not confined to the South Indian. On the contrary, they

appear to have been mainly with the ancient Gangetic languages, and even those Asonesian vocables that are now found in South India only, were probably derived from Gangetic vocabularies which have since lost these words or have themselves ceased to be spoken. The Asonesian vocabularies also contain numerous words of a similar phonetic structure to the ancient Indian, but which have no representatives in any known Indian language now existing, although they have Scythic, N. Asian, Iranian, Caucasian or Semitico-African affinities. Allowing for those that may have been received directly from the Malagasy and East African formations and from Japan, the great mass doubtless found their way to the islands through the basin of the Ganges and UltraIndia for their diffusion in the most ancient insular vocabularies, including the Australian, must have long preceded the era of a direct navigation between Southern India and UltraIndia or Indonesia. Of those chiefly found in the vocabularies of the more civilised and maritime tribes of Asonesia or within their range of locomotion, a large number were probably derived from India in the era immediately preceding the Arian, when the civilisation and maritime skill and enterprize of the leading Indian nations appear to have attained a high grade, and when their boats became the models of the Ultraindian and Malayu-Polynesian.

From the Australian era of Indian ethnology to that which immediately preceded the advance of the Arian race beyond the Indus, there must have been a great lapse of time. Of this we have some measure in the changes which had taken place in the Indo-Australian region. In Asonesia the Papuan race and formation had spread over the islands, obliterating or modifying the ancient tribes and languages. In India the leading Dravirian tribes had probably been already improved physically by mixture with immigrants of Scythic and Semitico-Iranian race. Their civilisation and languages had certainly been deeply modified by foreign influence. Making every allowance for what the Australians and other eastern tribes may have lost when they left the continent and became insular, it is probable that most of the arts for which the Dravirians have non-Sanskritic names were acquired by the race subsequent to the Australian era. Many of these

names have Scythic, Iranian, Semitic, Caucasian and African affinities, and it may be concluded that the civilisation of the principal Dravirian nations was mainly derived from foreign immigrant tribes, settlers and traders who entered India from the North West or visited its coasts from the northern and western ports of the Indian Ocean. The principal nations of the South are so closely connected in person, arts and language, that we cannot refuse to recognize in them the influence of one dominant and civilised people which at a remote period raised itself above the level of the barbarous tribes of India, and then spread itself by destroying, breaking up or transforming a large number of these throughout the more open country, as the Arian race afterwards did in the basin of the Indies and Ganges. The difference in physical characters between the higher classes of these nations and some of the lower castes and hill tribes, is so great as to indicate a large influx of a foreign people, and it is possible that the higher civilisation originated in a race of conquerors who were not sufficiently numerous to maintain their own language. Whatever nations,—Scythic, Iranian or Semitic—preceded the proper Brahminic Arians in the N. W. of India and the adjacent countries beyond it, must have influenced the principal or more civilised and exposed Dravirians. Such influences operate, and must have operated in all ages, wherever human races differing in power or civilisation come in contact, and the tribes of India have necessarily been always in immediate contact with tribes belonging to the races that predominated in succession to the westward of the Indus. The glossarial affinities with the Pashtu, Pashai, Brabui and other N. W. languages, although pre-Sanskritic, may thus be comparatively modern. They tend to shew that the East Iranian and North Indian glossaries were connected with the South Indian prior to the diffusion of the Brahminic formation and Sanskritic vocables into India, and they thus help to strengthen the other reasons for supposing that the grammars also were akin to the Dravirian and Scythic before they were modified by the Arian. The next great revolution in Asonesian ethnology after the Papuan, serves also to illustrate the history of the Dravirian in the era which immediately preceded that of Brahminic predominance, and was probably

marked by the influx of earlier tribes of the same race. The great southern movement of the Chino-Tibetan race which gave a Malayu-Polynesian population to Asonesia and a Chino-Ultraiadian and Tibeto-Ultraiadian to the trans-Gangetic peninsula, affected not only the middle and north Gangetic race but the Vindyaus also. The influx of this race from the east and of pre-Brahminic Arians or allied tribes from the west was probably contemporaneous at an early period, originating the mixed type which predominated in the ancient Niha-Polynesian branch of the Gangetico-Ultraiadian Asonesians. The pre-Brahminic Arian influence was probably sufficiently powerful and long continued to have produced an Irano-Mongolian type, prior to the proper Arian era of Northern India. It is even probable that the Dravirian nations of the Ganges, like the more civilised ones of the south, were greatly modified by archaic Iranian influence before the Ultraiadians entered the basin.

Although we have found it impossible to trace the actual history of the Dravirian formation, we have ascertained the main course of its development and various points of contact, at its successive stages, with other existing formations. The general conclusions may be recapitulated as follows:*

1. The general character of its harmonic, aspirate and liquid phonology is Scythic, but it has peculiarities in its strong and complex sounds. Save in some of the emasculated tongues it has a more harsh and primitive character than the Scythic phonologies.
2. The structural phonology is agglomerative and harmonic. It separates the formation not only from the Chinese and Mon-Anam but from the Tibeto-Ultraiadian, and allies it with all the harmonic formations. In its specific characters—a weakness of the agglutinative, elliptic and amalgamative power and consequent rarity of flexions—it is much nearer akin to Scythic than to the prevailing S. W. Asian and African formations and to the pre-Scythic S. European [Euskarian]. Its agglomerative power is similar to the Scythic, and is hence greater than Caucasian and Semitico-Libyan, but less than the Iranian, Zimbian and Malagasy and greatly inferior to the American. But in its archaic Australoid

* See Sec. 10 for review of the ideologic and phonetic affinities.

condition the formation was much more agglomerative, and consequently approached closer in phonetic structure to the great agglomerative alliance. In this respect as in the character of its elementary sound, and in the absence of the regular vocalic harmony that has been developed or diffused throughout the Scythic family it appears to associate itself with a proto-Scythic phonetic type.

3. The basis of the Dravirian vocabulary is monosyllabic. In this stage it is connected with the ultimate monosyllabic basis of all other languages, and by its pronominal roots, as well as many others, it specially connects itself with Chinese.

4. The actual form of the vocables is in general that of a root with definitives attached, usually postfixually but in some cases prefixually. In this stage it connects itself generally with all the existing harmonic languages; more closely with those formations in which the Scythic postfixing of definitives prevails to a greater or less extent although combined with prefixes, as in Caucasian, Indo-European, Semitico-Libyan, N.E. Asian, American and proto-Scythic; and specially and most closely with the Scythic formation itself in which this habit is predominant and almost excludes the prefixual. The postfixing of the pronoun possessively, and the attainment through this of the assertive form, are referable to the same idiom, and embrace a similar range of affinities. The South Dravirian group like the Indo-European formation has lost the primary universality of the habit, but, as in that formation, the postfixed pronouns and pronominal elements in assertives are a remnant of it. The Kol group in one class of words retains the idiom with substantives. The idiom is fully preserved in Scythic; in some American languages; in Semitico-Libyan with substantives and in most of the languages with assertives; in the Caucasian languages with substantives and in some with assertives; in Euskarian, as in some tenses of Libyan languages and in Indo-European, with definitives used as generic or absolute assertives only; in Malayu-Polynesian with substantives and in one group with assertives. The pronoun is prefixed in all or in some cases in certain of the Caucasian, Semitico-Libyan, Zimbian, Yeniseian and American languages (following the Chinese and Tibeto-Ultra-

indian collocation). The postposing or postfixing of words used to denote the other generic relations of substantives and assertives is a further phenomenon referable to the same idiom, for all formatives whether used with assertives or substantives are ultimately reducible to definitives and substantives. In the general position of the formatives Dravido-Australian resembles Scythic, Indo-European, and Assetic generally; Semitic in its archaic directives, and Zimbian in its assertive formatives; while it differs from the Semitic assertive formatives which are prefixal and infixal or flexional and from the Zimbian directives and definitives which are prefixal. With the Euskarian and American systems it agrees more closely than with the Caucaso-African. Hence the forms of the Dravido-Australian words, whether substantival or assertive, whether simply combining a concreted definitive with the root or clothing it with pronouns, directives or formatives, normally agree with the Scythic and proto-Iranian forms more completely than with those of any other family.

In its generally postpositional and inversive collocation, and several affinities in particles and idioms, it is Scythic, although other formations also possess several of these common characters. Thus the inversive tendency prevails to a large extent in the American languages, in archaic Iranian, in Euskarian, in Caucasian and in various degrees in the Semitico-Libyan and more especially in some of the Mid-African members of that alliance. The negative assertive is not only Scythic but Zimbian. The dual of the Kol and Australian groups and the double form of the 1st pronoun plural are very archaic and common idioms. But the general combination of traits, positive and negative, is much more akin to Scythic than to any other formation.

5. The principal idiomatic peculiarity when compared with Scythic, is the distinction of sex in the 3d pronoun and to a certain extent in the postfixed definitives of substantives,—an Indo-European and Semitico-Libyan trait.

6. In abstract and flexional development it has a wide range of affinities in its Australoid stage. In its Dravidian condition it takes its place with the more flexional Scythic languages. It is much more crude than Iranian in its historical development or

than the more flexional Semitico-Libyan languages.

The peculiarities of Dravirian and Draviro-Australian, even when compared with those Asiatic families that most closely resemble it, are conclusive against the hypothesis that it was derived from any of these. The common characters are referable to a mother formation which diverged into distinct channels and received special modifications in each, these main streams in their turn divaricating, while the different branches or some of them from time to time overflowed and came into mutual contact. Dravirian probably passed through an Australoid condition, and it is even probable that in a still older race it was more agglomerative and pleonastic, richer in forms although cruder and less flexional. But it cannot have passed through an Iranian, a Semitico-Libyan, a Zimbrian, a Caucasian or even a proper Seythian condition. All the distinctive characters of these formations are referable either to individual development and modification since they were separated from the stock common to all, or to their separation having preceded that of Draviro-Australian from proto-Seythian. It is probable that the more distinctive characters of Seythian were acquired subsequently to the migration of the Draviro-Australian family to the southward. The full development of the vocalic harmony probably took place in a branch of the Seythian family that had not become predominant till after that migration. The connection of Draviro-Australian in the Seythian continued till the postpositional structure had been developed. Its radical connection with the other formations belongs to periods preceding that development.

7. Glossarily the Draviro-Australian affinities have a wide range. The pronouns, numerals and definitives are E. Asiatic and Seythian. Several particles are Seythian and several are not only Seythian but S. W. Asian and African. The pronouns are not the prevalent Seythian, and their Chinese and other affinities lead to the inference that the basis of Draviro-Australian was not a Seythian language, but a distinct one which was placed within the range of the proto-Seythian development and took a similar form. But the vocabulary although not purely Seythian in its basis, has in common with Seythian vocabularies a large proportion of roots

and varieties of widely scattered Asiatic roots. Amongst the Mid and North Asiatic affinities the Samoide, Yeniseian and Ugrian are more numerous and often more close than the proper Tatar or any others, save the Asonesian. The Mid-Asian affinities of the latter are equally striking and very numerous and embrace a multitude of vocables not now found in Indian vocabularies. The Dravido-Asonesian languages have also a considerable number of vocables in common with the E. Iranian, Caucasian and Indo-European tongues and with the more Scythoid of the African vocabularies. The affinities with the proper Semitic vocabularies are less numerous. The affinities in ultimate monosyllabic roots embrace Chinese and Tibeto-UltraIndian vocabularies. The affinities with Semitic and African languages appear to be mainly indirect and referable to the common Mid-Asiatic element, but some are direct and imply an early and active commercial intercourse by the aid of the monsoons along the northern part of the Indian Ocean. The special affinities of the proper Dravirian with the Caucasian vocabularies are striking.

It is probable that the most numerous classes of glossarial affinities are connected in origin with the most striking phonetic and ideologic affinities. The most positive inference that we appear to be warranted in drawing is that the strongly Scythic character of Dravirian, and a large number of the Dravirian vocables, are referable to a variable Ugroid or proto-Scythic formation which early prevailed in Mid-Asia, and by successive ethnic movements diffused its form or extended its influence not only to the Caucasian, Iranian and Indian but to the East and Mid-African languages. The numerous and striking resemblances of Dravirian to East Iranian, East-African, Caucasian and Mid and North Asiatic, particularly Ugrian, Samoide and Yeniseian, vocables are best explained in this mode. As the Scythic tribes have always been the most nomadic, and the form of their languages is deeply impressed on Dravirian, it is reasonable to regard their movements as having been the common cause of these resemblances.

This enquiry, slight and superficial as it has been, may serve to

show not only that the ethnic history of the earlier races and languages of India and Asonesia is intimately connected with that of other Asiatic formations, but that larger and more exhaustive explorations of the affinities of roots and vocables will certainly lead to many positive historical results. But the comparative glossology of the other languages of Asia and of the world must be prosecuted simultaneously, for it is clear that the history of every separate vocabulary becomes more and more implicated in that of others, and embraces a wider and wider circle of relationship the further our researches penetrate into antiquity.

As each successive formation of Iraia becomes better defined, a clearer light will be thrown on the later stages of the Dravirian. But much of its more fundamental history will continue to depend on the progress of universal comparative glossology. Although in phonology, ideology and glossary it is distinctly connected with the Seythie, and also in a less degree with the Caucasian and Africo-Semitic alliances, it has so large a mass of peculiarities as to prove that, since the eras in which that connection arose, the languages of Western Asia and probably of all Asia have undergone great changes. At one time Dravirian or Australian may have closely resembled languages of the Panjab, of Persia or of Upper Asia, but no ethnologist would expect to find such a resemblance now. From all the preceding indications we are warranted in concluding that ethnic movements similar to the historical ones, sometimes rapid, and at other times gradual, have in all eras been going on from S. W. Asia to India and from India to UtraIndia and Asonesia. These movements have always left glossarial traces of greater or less importance, and we may therefore hope that in the progress of ethnology each will be more or less clearly fixed.

in Appendix I.

ETHNOLOGY OF THE INDO-PACIFIC ISLANDS.

CHAPTER VI.

ENQUIRIES INTO THE ETHNIC HISTORY AND RELATIONS OF THE
TIBETO-ULTRAINDIAN AND MON-ANAM FORMATIONS.

[*Introductory Note*—The conclusion that the Mon-Anam numerals as well as the pronouns are of North-East Dravirian origin (chap. v. sec. 11), affects the views previously advanced in these papers as to the ethnic position of the formation, and the Si-fan vocabularies of Mr Hodgson having now placed beyond all doubt the lines of connection between the Tibetoid languages of Ultraindia and India and the Tibetan and Scythic, it becomes necessary to alter the order in which I had treated of the Ultraindian languages in this part. Instead of having to ascertain the distinctive characters of the Ultraindo-Gangetic group by a prior approximative determination of those of the Mon-Anam, we can now proceed much more surely by reversing the order. The form and substance of the Burma-Gangetic branch when it entered Ultraindia being traced through its affinities with the existing languages of eastern and western Tibet, a well defined basis is obtained for the investigation of the original condition of the older Ultraindian languages. The surrounding and intrusive formations—Chinese, Tibetan (Si-fan, Bhotian), Dravirian and Arian are all referable to foreign lands, and when the alien ingredients which the mixed languages of Ultraindia owe to these formations have been successively removed, we may hope to arrive at the native Mon-Anam residuum. The order I had adopted in considering the formations following the Dravirian was “B. the South Ultraindian or Mon-Anam; C. the Tibeto-Ultraindian or Burma-Himalayan; D. the Tibetan.” (vol. vi. p. 658.) The arrangement now adopted is—A. the Tibeto-Burman formation, I. The Tibetan branch embracing 1st the Si-fan languages and 2nd the Tibetan proper which it may now be preferable to term Bhotian; II. the Ultraindo-Gangetic branch; B. the Mon-Anam formation. As the Si-fan dialects have not hitherto been noticed, it becomes necessary to consider their characters so far as the materials supplied by Mr Hodgson allow. The sections relating to them are therefore to

be received, in some of the details, as supplementary to sec. 2 of chap. iv.

To show how Mr Hodgson's Si-fun vocabularies affect the general inferences at which I had arrived, I may be allowed to refer to some of the earlier portions of this series of papers. In the 2nd section of that "on the ethnology of South-Eastern Asia" (vol. iv. for 1850, p. 461) the following remarks were made on the distribution of the Tibetan tribes.

"The western or inner division is chiefly occupied by the Tibetan tribes who possess the whole of the great trans-Himalayan depression which slopes westward to the margin of the Hindu-Khush, forming the transalpine basin of the Indus, and eastward to the unknown point where the basin of the Zangbo bends south and sends its waters into the basin of the Brahmaputra or of the Irawadi. They have even extended to the S. East and entered the upper part of the eastern basin of the Brahmaputra where they are in contact with the Mishmi. Tibetan tribes and others allied to them have spread over the basin of the Ganges, although they are now chiefly confined to the Himalayas, the Vindyas and the basin of the Brahmaputra. In the basin of the Brahmaputra they are blended with allied tribes of the Mayama family. Rude Tibetan tribes of nomadic predacious habits, known in Tibet chiefly under the generic name of Kham and in China under that of Si-fun, are spread over all Tibet to the northward of the depression of the Indus and Zangbo, and eastward along the greater part of the eastern margin of the inner division to a considerable distance within the boundaries of the Chinese Provinces.* They probably come in contact with the inner tribes of the Brahmaputra and Irawadi basins, and are intermixed with the most westerly Chinese tribes and the Mongolian tribes who chiefly occupy the northern and N. E. portions of Tibet.

"The ethnology of the E. middle division is very obscure, and will probably prove to be of extraordinary interest. In a region of which a great portion is inaccessible from lofty mountains and snow, many of the inhabited districts must still be secluded. Numerous petty tribes must retain their ancient independence and

* They are found to the west of the Yalong and probably in some places reach to the Yun-ling mountains.

their aboriginal languages and manners, and it is probable that amongst the former some will be found intermediate between the Chinese, the Burmese and the Tibetan. This region promises to be the richest for ethnological discoveries of any that yet remains unexplored in Asia, or perhaps in the world. All the S. E. Asian tribes appear to meet in it. On the south the upper division of Burmah and the Chinese province of Yun-nan are known to contain many rude tribes akin to the Burmese and the Lau and all or most of the Turanian races who now occupy the lower basins of the rivers which descend through this region must have been derived from it. The great provinces of Sze-chuen and Kan-suh are also known to contain rude tribes, and the languages of even the more civilised communities of the latter are peculiar.* In the western parts of these provinces the Kham or Si-fan of Mongolian habits, and the true Mongol tribes of the Mongfan and Kukuror Tartars meet the Chinese tribes. In the S. the Mongfan are in contact with the most northerly tribe of the Irawadi basin, the Khanung. The civilised Chinese have pushed themselves into all the more open and fertile portions of the western Provinces. It is through the Province of Kan-suh that the great trading route lies which connects China with Western Asia, and the movements along which must in all eras have affected the distribution of the tribes of middle Asia."

In the Introductory paper (vol. iv. p. 441) and in the earlier chapters of this Part the terms Tibeto-Ultraindian and Tibeto-Indian are used as descriptive of these Ultraindian and Indian languages that are allied to Tibetan, but distinct from the derivative Tibetan dialects of the Himalayas. In the Introductory paper I remarked that the languages in question had distinctive features when compared with Tibetan, and that the Tibeto-Indian tribes were directly connected not with the Tibetans but with "a proto-Tibetan era when the present widely spread Tibetan race may have only been one of several rude trans-Himalayan tribes speaking dialects of an incipient Tibetan character or even of one nearer the Chinese." The proto-Burmans, it was remarked, "probably occupied some portion of the country on the bounda-

* According to Chinese writers some of the eastern Tibetan dialects approximate to the Chinese.

ries of China and Tibet. Many other intermediate languages may have existed and some are probably still preserved." In the earlier chapters of this Part the line between the Ultraindo-Gangetic languages and the Tibetan was more broadly and distinctly defined. In chap. I. the former was marked out in the following passage. "The next Ultraindian formation was the Tibeto-Ultraindian which is distinguished from the Mon-Anam by its Tibetan or post-positional and inversive character. It embraces the Burman, the Karen, the Yuma dialects from Kyen to Kuki, the Manipuri, Naga, Mikir, Singpho, Mishmi and Abor-Miri. It also spread westward up the Gangetic basin and into that of the Sutlej; the Garo, Bodo, Dhimal, the Akha, Changlo and the other Himalayan languages, as far westward as the Milchanang and Tibberkad, belonging to this formation so far as they are not Dravirian, Tibetan or Arian, and so far as they do not preserve remnants of the Mon-Anam formation, the latter being slight on the north side of the Gangetic valley compared with the south or Vindyan. This Tibeto-Ultraindian formation I conceive must have originated at a very ancient period in eastern Tibet or the adjacent territory now Chinese, because it is intermediate between Chinese and Tibetan and more closely connected with the latter than the former."

The Si-fan vocabularies which we owe to Mr. Hodgson have partially removed the veil which hung over eastern Tibet, and my anticipation that the ethnology of this region when explored would prove to be of extraordinary interest, has been verified. Much remains to be ascertained before we can enter on a full investigation of the relation of the Si-fan dialects to the Tibetan and Ultraindian, but enough has been published to satisfy us of the important fact that the Ultraindo-Gangetic languages are more closely connected with the Si-fan than with the proper Tibetan dialects. It will now be convenient to distinguish the latter by the national name of Bhot and to use Tibetan as including both Bhotian and Si-fan tribes and languages. The term Tibeto-Ultraindian or Tibeto-Burman may be applied to the whole family—Tibetan, Ultraindian and Gangetic—and Ultraindo-Gangetic to the southern branch, excluding the southern Bhotians.

I have not thought it necessary to rewrite the whole of this chapter. We may expect further information from Mr. Hodgson respecting the Gangetic and Si-fan languages, and with the present materials, it would still have remained fragmentary whatever shape had been given to it. It will be understood therefore that much of the chapter remains as it stood before I received the Si-fan vocabularies, but wherever it appeared advisable in order to save repetition I have embodied the new data. In other cases the additions constitute separate sections or paragraphs. No great inconvenience can arise from the Bhotian and Si-fan branches being to some extent separately treated. There are indeed reasons in favour of such an arrangement. Bhotian is the only Tibetan dialect that has been investigated in detail and its influence on the Ultraindo-Gangetic languages is to a certain extent distinct from that of the Si-fan dialects.]

I. THE TIBETO-BURMAN FORMATION.

Sec. 1. THE GENERAL CHARACTERS OF BHOTIAN, AND ITS RELATION TO CHINESE AND SCYTHIC.

The phonetic and ideologic relation of the Bhotian to the Gangetico-Ultraindian languages in general, and to the Burman in particular, as that of which the grammar is best known, has been already considered. The result of our enquiries may be stated to have been that this relation is of two very different kinds and belongs to widely separated eras. A formation intermediate between the Chinese and the Bhotian, and, it may be added, having some Scythic affinities of its own, spread into Upper Ultraindia at a remote period, its native seat having been in all probability the adjacent province to the northward comprising eastern Tibet and a portion of N. W. China. Of this formation the Burman branch of the Ultraindian languages is the best known representative. But it is a comparatively recent or much modified form. The older form was less emasculated, its vowels were broader, and it used prefixes which gave it a dissyllabic rather than a monosyllabic form. The archaic formation spread down the Irawadi and is now best represented by the Naga, Manipuri and Yuma dialects. This form of Tibeto-Burman appears to have preceded the Burman even in the valley of the Irawadi; and the

other dialects of the same group retain its phonology more tenaciously than Burman. It also spread to the westward from the Asam valley to the head of the Sulej, all the Gangetic band of Tibeto-Ultraindian dialects from Mishmi to Milchanang adhering to it to a great extent. This form has itself several phases. The earliest appears to have been broad, sonant and in its finals consonantal. The later show various degrees of vocalicism, the final consonants being softened or elided. In all the groups, and in some cases even in local subdivisions of the same dialect, the broad and strong phonology still co-exists to a greater or less extent with the soft and slender. The current and the old or written Bhotian (chap. iv. Sec. 1.), the different Abor dialects (*ib.* sec. 5), Burman when compared with Karen, Karen when compared with Khyong and the other Yuma dialects, Gyarung when compared with Thochu or Bhotian, all illustrate the progressive emasculation of the phonology, and in most of the dialects archaic broad vocables are current along with slender ones. In the Gyarung-Burman or Eastern Tibet and Irawadi band the attenuation is most marked. In the Burman phonology the propensity to ellipsis, slender vowels and consonants,—as *i* for *a*, *e* for *i*, *t* for *h*, *y* for *r*—has received a peculiar development. This latest form is found most strongly marked in Burman itself which has become highly monosyllabic and attenuated. In Karen and some of the other members of the proper Irawadi group the older form is more persistent.

The history of the direct and exclusive Bhotian influence to the southward of the snows is quite distinct. It began by the migration of Bhotians across the Himalayan passes, the occupation of Bhutan, the partial occupation of more western districts, and the diffusion of Bhotian political and ethnic influence not only over the prior Himalayan tribes but partially also over those of the Gangetic plain and North Ultraindia. The Bhotian language was transported to this side of the snows. It partially communicated its forms to the Himalayan languages from Milehanang to Abor-Miri, and in a slighter degree to the Middle Gangetic (Dhimal, Bodo) and some of the North Ultraindian (Garó, Mikir, Naga &c.) It thus appears that the proper Bhotian influence on

the Indian and Ultraindian phonologies and ideologies was inconsiderable. It remains to enquire into the extent of its glossarial influence. The connection between the tribes and languages of Tibet and those of India, Ultraindia and Asonesia, appears also to render a brief enquiry into the trans-Himalayan relations of the Tibetan necessary for a satisfactory view of the ethnology of the Indo-Pacific islands. I shall proceed to this, in the first place.

The cis-Himalayan Tibetoid languages have distinct affinities with those of the Tatar and more northern hordes of Asia. There has evidently been more than one southern movement of the Tibetans in different eras. Tibet has always been exposed to the incursions of the nomadic Tatars, who have, in turn, spread themselves over the steppes between southern Tibet and the great Desert. The relations of Bhotian, in its present form, to the more northern languages, may therefore throw some light on the prehistoric changes which it suffered, and connect the Scythic revolutions in which they originated, with the ethnology of the provinces to the south of the Himalayas.

In preceding chapters it was remarked that Bhotian was so highly Scythic in its ideology that it might be considered as a non-harmonic member of the Scythic family. The phonology preserves a crude or Chinese character almost to the same extent as the Burman. The earlier form of Burman appears to have been harsh and sonant like the purer Bhotian and both are essentially monosyllabic and non-harmonic. In this respect they depart greatly from the Scythic phonology and especially from its more agglutinative varieties. But the basis of even the Ugro-Japanese languages is monosyllabic with very little disguise, and many of them preserve a strong sonant and aspirate tendency. It is probable therefore that at the remote period when the Ugrian formation first modified the earlier and more Chinese form of Tibeto-Burman, the former was equally sonant with the purer Tibetan. In the Ostiak and even in the Turkish vocabularies words frequently occur entirely Bhotian in character. Some of these are found little changed in Bhotian. For example the Ostiak *log-ol*, "*hand*", is evidently the parent of the Bhotian *lag*, the Turkish having the slender form *i-lik*. The Turkish *syod*

"light," preserves the original of the Bhotian hold in the same sonant form. Ugrian and Turkish retain sonant forms of an ancient root for "*river*," which has become softened in the prevalent Tatar, Tibetan, Ultraiidian and Asonesian glossologies (Comp. Ugr. *ju-an*, Turk. *sug*, Turk. *u-sun*, *chun*, Tibeto-Indonesian *chang*, *sung* &c.) The Ugrian log, "*horse*," (also *lo*) is more sonant than the derivative Himalayo-Burman and Indonesian forms *rang*, *ra* &c. In the less emasculated Indo-European vocabularies, the sonant forms of the ancient Turanian roots are frequently retain. There can be no doubt that the Chinese and Chino-Ultraiidian or Mon-Anam formation was also originally highly sonant, but the strong glossarial affinity of Bhotian to the Ugrian alliance renders it clear that the sonant character of Bhotian was immediately related not only to the archaic Chinese but to the Scythic, and through it, to the archaic Indo-European. It has a greater range of final consonants even than the most consonantal and sonant of the known Chinese dialects, the central and southern. At the period when the *Touic* Dictionaries were compiled—the 6th or 7th centuries of the Christian era—the phonology of the Kiang provinces was more emasculated than the written Bhotian. The latter probably preserved an example of very archaic Chinese phonologies, anterior it may be to the development of the harmonic phonology and when the mother dialects of Scythic, Indo-European and all of other formations consisted of crude, monosyllabic and tonic roots*.

The Bhotian phonology is much cruder and more archaic than the Scythic or that of any of the other harmonic formations. When the formation separated from the common stock the latter was little in advance of the Chinese, monosyllables and homophons abounded, agglutination was feeble or only beginning to affect the form of vocables, the definitives and other particles were not conereted with substantial words or with each other. The Bhotian phonology contrasts so strongly with the highly harmonic Scythic that

* Since chap. III. was published the Rev. Mr Edgkin in his Grammar of the Shanghai dialect has shown that the sonant tendencies of some of the middle and southern languages are more decided than previous Grammars had led us to believe. In a subsequent section the results of Mr Edgkin's original and important enquiries into the phonologies of the Chinese dialects will be noticed.

it may even be considered doubtful whether the harmonic development had commenced when the mother-dialect of the former was first separated from the proper Chinese. Much of its slight agglutinative and harmonic power has probably been acquired since, and Scythic may have had much influence on its progress. In another place the conclusion was arrived at that the collocation of Scythic was older than its harmonic phonology, and in Bhotian we have a partial example of its pre-harmonic condition.

Its general structure although Scythic when compared with Chinese, Mon-Anam, Asonesian, Semitico-African and Caucasian, is not purely Scythic.

The use of postfixed definitives is an archaic Turanian, Caucasian, Semitico-Libyan and Indo-European trait. The most common Tibetan postfix* *ma*, *pa*, *va*, *ba*, &c occurs frequently in Ugrian vocabularies, and it is also Semitico-Libyan, Caucasian, Indo-European and Dravirian. In Chinese it is a 3rd pron. The postfixes distinguish Bhotian strongly from Chinese and there can be no hesitation in considering them as of Ugrian affinity. The other Turanian postfixed definitives are *na*, *ni*, *n*, *ſe*; *ra*, *la*, *ol*, *el*, *er*, *ſe*; *ha*, *ga*, *h*, *ſe*; *s*, *z*, *t*, *d*, *ch*, *j*; which with the labials comprise the whole range of the Tibetan.

The prefixed consonants of Tibetan *b* or *v*, *m*; *h*, *s*, *z*; *l*, *r*, *d*; *g* are not prevalent in the Turanian languages, but Hungarian has *az*, as a separate preposed definitive, and in others vocalic prefixes occur which are probably in many cases contractions. Turkish appears to have prefixual *t*, *d*, *ch*; *l*, *s* conereted. The Yeniseian languages will probably prove to be the chief existing link between the proper Scythic and the N. E. Asian and American. In many respects they may be considered as entering with the Samoiidean group into the Ugrian family. But with strong Ugrian affinities they combine independent traits, and others that are N. E. Asian and American. Amongst the latter is the retention of prefixed, along with postfixed definitives, embracing the entire

* I give a few examples in which both the root and the postfix are the same in the two families.

Leaf, Bhot. *loma*, Mordv. *lopa*;
Finger, Bhot. *sormo*, Fin *sermi*;
Rain, Bhot. *charba*, Sam. *serico*.

Scythic and Bhotian range,—ma, pa, pi, bi, &c; ta, da, di, d &c; si, hi, chi, cho &c; al, il, ol, &c; ki, ke, ku, gi, yi, &c; a, u, o, i, e. These definitives are more common as prefixes than as postfixes, and when the habit of the formations which succeed Scythic on the N. E.* and S. W. and have fundamental affinities with it, is considered, no doubt can remain that the distinctively postfixual idiom of Scythic was exceptional in its origin, and was preceded by a condition of the mother-language in which the definitives were current as separate particles, and capable of being preposed as well as postposed according to dialectic taste and fashion. To this proto-Scythic stage of the Mid-Asian formations Bhotian, like Yeniseian, partially adheres. In this respect their form is older than the proper Scythic and more akin to the basis-form of the Caucasian, Semiteo-African and other formations that separated from the common stock before the dialect in which Scythic originated had acquired its peculiar postpositional structure. In the use of prefixed definitives as in many other traits the Tibeto-Ultra-indian and N. E. Asian families have departed less than the Scythic from the archaic type preserved by Chinese. In Chinese the true definitives precede the words they define†. The full range is also preserved in Chinese, although the definitives are now rarely used save emphatically or as demonstratives. It has ki, ke, chi, cho, ti, i, ku, tsze, hi, ho &c; na; and pe, wa. Chinese also uses double demonstratives, or rather the demonstratives followed by the generic definitive or segregative ko, ku,—na ko, che ko, ti ku, i ku, ku ku. In the first stage of an adhesive phonology these would become nako, cheko, tiku, iku, kuku. They are thus the prototypes of the double definitives, prefixes and postfixes found in most of the harmonic formations.

It is obvious that the full forms of the definitives, as in Chinese, must have preceded that in which they lose the vowel and coalesce with the root into one monosyllable. The Bhotian initial consonants were originally separate preposed definitives and they are preserved in the full form as prefixes in other dialects of the

* The Aino-Kurilian group has prefixes as well as postfixes—ma, pu, p, f; t, d; so, sa, sha, sh, si, i; no, on, &c; ku, g &c. Yukahiri has also prefixes, but its general habit is postfixual like Scythic.

† The Gyarung prefix ki- is the Chinese definitive ki, ke, chi, che. Hence we find coincidences such as *kitan Ggyar*, *chi tun Gyami*, *egg*. Kwan-hwa has the Gyarung vowel tan.

Tibeto-Ultraiidian family. In the N. E. Asian, Caucasian, Semitic-African and Asonesian provinces both forms of the prefixes are also found.

In Tibetan the labial definitives are still current in their primary character of substantive words "*father*", "*mother*". As a definitive postfix *-pa*, *-po* has acquired a generic masculine application, and *-ma*, *-mo* a feminine, and they are even extended to neuter names. In Seythie both the primary and the sexual significations have been lost. In Dravido-Australian, Indo-European and Semitic-Libyan agglutinated definitives are found retaining a sexual force but with the primary substantial meaning lost. Tibetan here also stands between Chinese and the more agglutinated and concreted formations. In Chinese there are several classes of postposed sexual particles, as in Tibeto-Ultraiidian and Dravirian. Thus for human beings Kwan-hwa has *nan masc.*, *neu fem.*; for the lower animals generally *kung m.*, *mu f.*; for birds *heung m.*, *tsze f.* As in Bhotian, Indo-European and Semitic-Libyan the idea of gender has been transferred to inanimate things, for which *keén m.*, *kwän f.* and *yin m.*, *yang f.* are used. In some of the Seythie languages there are traces of a similar attribution of a distinction of sex, energy &c to inanimate objects.

A marked departure not only from the Seythico-Dravirian but from the Chinese collocation occurs in the position of the qualitative, which follows the substantive. This idiom connects Tibeto-Ultraiidian with the adjacent Mon-Anam. It is clearly abnormal, because the primary relation of possession and attribution, of which the qualitative is but a variety, is denoted in the Tibeto-Ultraiidian languages, as in Chinese and Seythie, by preposing the possessive. Consistently also with the normal structure the adverb precedes the qualitative or verb, and the subject the predicate.

The Bhotian glossary is highly Seythie but in its basis it is independent to a considerable extent and with strong Chinese affinities. The Seythie glossarial basis, in pronouns and many particles and formatives, is so uniform that it may be referred to one mother-dialect. The Bhotian basis is not a modification of this dialect like that of all the Seythie languages. It is a distinct China-Seythie sub-formation, and Chinese more than Seythie.

SEC. 2. THE GENERAL CHARACTERS OF THE SI-FAN LANGUAGES AND
THEIR RELATION TO BHOTIAN.

Since this paper was written Mr Hodgson has published a series of vocabularies spoken by the tribes occupying the mountainous country between the land of the proper Tibetans or Bhot and that of the proper Chinese. These vocabularies are of remarkable interest. They prove that the Tibeto-UltraIndian formation extends northward, from the most northerly dialects previously included in it [Singpho, Jili] to a point in N. E. Tibet which has not yet been ascertained, but where they appear to be succeeded by Sok or Mongolian tribes identified by Mr Hodgson as the Olet and Kalnak of Remusat and Klaproth. These Mongolians occupy the eastern portion of northern Tibet, the western being in like manner the southern extremity in this quarter of the Turkish province and traversed by tribes called by the Tibetans Hor and considered by Mr Hodgson to be Turkish. These Tatars chiefly roam on the north of the Nyenchhen-thangla range but there are also numerous scattered Horpa and Sokpa in southern Tibet. The new series of Tibeto-UltraIndian vocabularies comprises, 1st the Takpa (of the so-called Towang-Raj west of Kwombo), 2nd the Manyak,* Gyarung† and Thochu spoken by tribes which occur in this order between Yunnan and Amdo, the latter division of Tibet being occupied by a Si-fan tribe who for the most part speak Bhotian. To these are added the Gyami, a dialect of Chinese, and the Sokpa and Horpa. The last is considered by Mr Hodgson as Turkish, but it appears to be Tibeto-UltraIndian in phonology and glossary. It is a very archaic dialect of Chino-Tibetan, preserving some evidently archaic varieties of the common root now obsolete in Chinese, in its forms intermediate between Bhotian and the East Tibetan dialects but leaning more to the latter than the former, and possessing special affinities with current Chinese and Tatar, from which it may be inferred that Horpa has not only been long conterminous with Scythic languages, but that it was in contact with Si-fan dialects and like the southern Takpa directly acted on by Chinese before the modern expansion of Bhotian to the eastward.

* Mr Hodgson describes the physical characters of a Manyak, a native of Rakho, six days south of Tachindo.

† Mr Hodgson describes a Gyarung from Tassar, north of Tachindo.

The most important conclusion to be drawn from these vocabularies is that three at least of the Tibeto-Ultraindian ones, the Manyak, Gyarung and Takpa, are allied to the Irawadi or Ultraindian branch of the family more than to the Bhotian. The general structure and phonetic form of the vocables resemble those of the Ultraindian vocabularies that have been least modified and emasculated by the influence of vocalic Chinese, and especially those of the Naga-Manipuri group. Manyak and Gyarung however have also Burman forms.

Gyarung, Horpa and Thochu have a considerable portion of final consonants. Manyak is vocalic in this respect, in its slender vowels and in the forms of several of its words resembling the emasculated Burman sub-formation.

Slender vowels (*i, e*) are more common in all the dialects than in Bhotian. They abound in Manyak and Gyarung, especially in the latter, which is more slender, but less elliptic than the former. Thochu and Horpa, especially the latter, have more frequently broad vowels as in Bhotian. But it is to be remarked that a special connection exists between Horpa and Thochu and between both and Manyak. The glossarial affinity between Thochu and Manyak in particular is often very decided. The common varieties have often *a* as the vowel where the other Tibetan or Chino-Tibetan varieties of the same root have *o, u, i, &c.*

I give a few examples of the great attenuation some of the Tibeto-Ultraindian vocables undergo in Manyak "I," *a* (nga Gyarung); "arrow" *m-a* (*m-la* Takpa); "bird" *ha*, (*bhya* Lhop.); "boat" *g-u* (*g-ru* Takpa, Bhot.); "village" *hu* (*khyu* Gyar.); "ripe" *de-mi* (*min* Thochu, *ha-s-man* Gyar.); "black" *da-na* (*ha-nak* Gyar., *nya-nya* Horp.). The vowel generally retains an archaic broad form.

The broad phonology appears to have predominated in archaic eras. Some of the remote Scythic and N. E. Asian languages still affect broad vowels. The Scythic languages vary amongst themselves in this respect, but in many there is now a disposition to slender vowels. The Turkish dialects frequently affect them. In the modern Chinese they are common, and the strong development of this tendency and of general emasculation in the Tibeto-Ultraindian languages, and especially in the eastern

or Gyarung-Burman band, is chiefly ascribable to the predominance and diffusion of the modern North Chinese or Kwan-hwa phonology. But the slender forms of the Sifan-Burman vocabularies are not always to be considered as the result of a native development of a soft phonology under the influence of Kwan-hwa. On the contrary, many slender varieties are of the highest antiquity in all the East Asian formations,—Chinese, Scythic and Tibeto-Ultraindian. They are even preserved with the archaic final consonants in many words. The co-existence of broad and slender forms, e. g. *log*, *lik* “hand,” is in accordance with the unstable character of the vowel in the Scythic phonology. This vocable affords an illustration of the independent development of slender forms in the Scythic and in the Tibeto-Ultraindian provinces. The broad archaic form was common to both, e. g. *log-ol* Osiak, *lag-pa* Bhot., *e-lag* Abor, *luch-led* “finger,” Kamschatkan. The Abor *e-lag*, *a-lak* has the Turkish prefix, but in Turkish the slender phonology has produced the forms *i-lik*, *a-li*, *e-li*, while the archaic broad vowels are preserved in *a-la*, *a-lo*. In Bhotian &c. the *g* has also become *k*, *lak-pa*, and the emasculated Burman has not only evolved a slender vowel but changed *k* to *t*, *lat*, *let*. In this case the Burman *let* and Turkish *lik* are obviously independent. But there are other cases in which archaic slender Scythic forms have spread not only through the Tibeto-Ultraindian but through the Asonesian provinces. For example, the Gyarung-Burman *li* “air,” Asonesian *iri* &c. is clearly archaic and Scythic, *lil*, *il* &c. (as well as Caucasian, Semitic &c.) and not a modern variation of the Bhotian *lung*, *lhak* &c.

Even Thochu and Horpa have several vocables with slender vowels where Bhotian has broad ones. Ex. *Hog*, *phak* Bhot., *pi* Thochu; *Ear:h*, *sa* B., *zi-p* T.; *Road*, *lam* B., *rah* Manyak, *g-rih* T., *tri* Gyarung; *Salt*, *chha* B., *chh* T.; *Snake*, *sbrul* B., *brigi* T.; *Bone*, *ruspa*, *ruka* B., *ripat* T., *vera* Horpa.

Gyarung has often *e* where Bhotian has *o*, *u*, *a*, or *i*; *i* where Bhotian has *u* or *e*; and sometimes *o* where Bhotian has *a*. Ex. *Bird*, *byu* B., *pye* G.; *Day*, *nyi* B., *nye* G.; *Ear*, *na* B., *ne* G.; *Moon*, *la* B., *lkeh* G.; *Water*, *chhu* B., *chi* G.; *Tooth*, *so* B., *syo* Horpa, *swe* G., Thochu; *Mouth*, *kha* B., *khe* G. Gyarung is equally prefixual with the more prefixual vocabularies of N.

Ultrahindia, the common prefixed definitive being *ta-*, varied to *to-*, *ti-*, *tir-*, *tar-*, [as in some Ultrahindian and Himalayan vocables], *da-*, *na-*, and also passing into *ka-*, as in many Ultrahindian vocabularies. Qualitatives take *ka-*, corresponding with the Bodo *ga-*.

Manyak has fewer prefixes than Gyarung and they are more mixed. The labial which is rare in Gyarung occurs frequently under the forms *ma-*, *m-*, *ba-*, *mer-*, *wo-*, and postfixually in the forms *-bi*, *-mi* (the Bodo prefix *b* in *be*). *De-*, *da-* is common with qualitatives, corresponding with the Chinese possessive *ti*, *di*.

Thochu words have much more frequently a Bhotian form. The prefixes which are comparatively infrequent occur both in the Gyarung and Ultrahindian vocalised form and in the Bhotian consonantal one, *mo-*; *ki-*, *cha-*, *ra-*, *da-*; *cha-*, *ki-*, *r-*, *s-*, *g-*, *h-*. Some words have also the Bhotian postfixed labial definitive (*-mo*, *-pa*, *-wo*, &c.) The numerals take *-ri*, *-re*, the Seythico-Tibetan pose.

Horpa has also prefixes and they are generally in the consonantal Bhotian form *s-*, *l-*, *r-*, *h-*, *v-*. Qualitatives have frequently *ka-* &c, and assertives *ta-*, *tan-*, *tam-*, *ta-r*, *kha-*, *gu-*, *gu-r*, *na-*, *na-ha-*, *na-p-*, *ya-*, *rha-*, *rhang-*, *zu-*, *zu-r*, *wa-*, *wa-n-*, &c as in Gyarung, Thochu and Bhotian.

The use of prefixes in languages so far north as Gyarung, Thochu and Horpa renders it probably that this habit also characterised the eastern and southern branch of Tibeto-Ultrahindian in its primary form, thus confirming the opinion expressed in chap. iv. (Journ. Ind. Arch. vii, 126) that the system of prefixed and preposed definitives was the original one of the whole Chino-Tibetan linguistic province, as of a much wider area, and probably also the earliest in the world.

In harmonic power the Gyarung appears to be somewhat in advance of Bhotian, but this may arise from the curt and consonantal phonology of the latter having obscured the vowel changes. In agglutination they are probably nearly alike. In Gyarung the vowel of the definitive appears to be affected by that of the principal word as much as in the closely connected Dhimal and Bodo (see chap. iv. sec. 3). Hence the superiority in this respect of these Gangetic dialects over most of the Ultrahindian can no

longer be exclusively ascribed to the influence of the Dravirian phonology. In Gyarung it must be considered as an acquired Scythic trait and in Bodo and Dhimal it must be Scythic through Tibetan so far as it is Tibetan. Mr Hodgson gives *we-pe* "his father," *wə-mo* "his mother" &c. In like manner the vowel of the root is modified by that of a postfix.

Mr Hodgson gives a few examples of the formative system of Gyarung. The formatives are prefixal as well as postfixal and they are to some extent combinable, as in Bhotian on the one side and Burman on the other. From these examples it may be gathered that the common definitive prefix *ka*, *ta*, *da*, *na*, or *ya* is, when the sense requires it, assertive (present) or generic. In the sonant Bhotian the definitives *g-* [= *k-*], *d-* [= *t-*], which I have considered as identical with the localitive *na*, *la*, *ra*, &c (Journ. Ind. Arch. vii, 113), *m-*, *h-* &c, are all assertive, with a variable tense power. In Gyarung the repetition or addition of *ta* (*ka-ta*, *ta-ta*, &c,) distinguishes the past from the present. In the negative assertive *ka-*, *ta-* &c is replaced by *ma-*, corresponding with the Bhotian *mi-*; Chinese *m* &c. *Sa*, postfixed to the common assertive definitive, renders it causative. It is the Bhotian instrumental, active, intensive and causative particle *s*, which in that language is postfixed to the root. But it is also postfixed to the definitive *la*, *na* &c to form the ex-transitive. In Gyarung *-si*, *-ti* is personative and participial.

The use of double and even triple definitives is common to Gyarung with most languages which retain such particles. The power of combining them and of using both prefixes and postfixes with the same root is Tibetan-Ultraindian, N. E. Asian, American, Caucasian, Euskarian, Semitico-African, Asonesian and archaic Indo-European, that is, it is common to all the formative alliances.

From the proximity of Gyarung to the Chinese and Chino-Ultraindian province it will probably prove to be more prefixal or less Scythic than Bhotian. But without even excepting the prefixal position of the qualitative (possessive) definitive *ka-* (in Bhotian *-kyi* &c, Changlo *-ga*), the examples hitherto given have parallels in Bhotian. In Chinese itself the poss. and qualitative particle is postposed, and although Gyarung generally dispenses

with declensional signs, as Chinese does when they can be avoided, it preserves the Chinese and Bhotian idiom when it uses a possessive particle, as in Lama um boroh, "*the Lama's horse*." That Bhotian also used the qualitative and poss. definitive prefixally is proved by several examples amongst the numerals and qualitatives. Thus *gehig* 1, *guyis* 2, *gsum* 3, correspond with the Gyarung *hati* 1, *hanes* 2, *hasam* 3. When the qualitative prefixes of Bhotian do not agree with the Gyarung *ka-* they are sometimes similar to the Manyak and Dhimal *di-* &c, or to other Tibeto-Ultratrainian forms. The Gyarung verbs like the Chinese and Bhotian are simply substantives or crudes and the particles of tense, mood &c stand ideologically on the same footing as the definitive and directive particles. In Chinese some of these are preposed and some postposed. In Bhotian the definitive *d-* or *da-* is used as a generic assertive, while with some words it is future or aorist (past and future). *B-* or *ba-* is generic, past or aorist. *M-* or *ma-* is commonly generic, but with some words it is aorist exclusively. *H-* or *ha-* is generally present, but sometimes present and future. In Gyarung the prefixal definitives are more fully preserved and freely used than in the old or written Bhotian. But their redundant cumulation is not peculiar to the verb, as substantives and qualitatives occur with double and triple prefixes (Hodgson, 134). In the ordinary possessive use of the pronouns they are preposed, in accordance with the regular idiom of Chinese, Bhotian, Scythic and Dravirian, and not postfixed as in the abnormal or secondary and euphonic pronominal habit of most of the Scythic and Dravirian languages. Ex. *nga-pe* "*my father*"; *na-pe*, "*thy father*"; *wa-pe*, "*his father*". The same idiom is followed with assertives. *Nanre na-syo*, *thou ridest*. It does not appear that the pronoun is always thus preposed in its separate form as well as prefixed in its radical form. The assertive idiom is obviously the simple possessive *na-syo*, *my-riding*. In the first person the assertive or attributive root takes a postfix *-ang*. Mr Hodgson appears to consider it as representing the 1st pronoun, and generally indicating a reflexive character. To this he attributes its employment in the poss. case and its so frequently designating the first person when appended to verbs and their

participals (p. 66). In some of the other languages to which Mr Hodgson refers, it appears to me to be not a distinct reflexive particle representing the 1st pronoun, but merely a variety of the 1st pronoun itself, which is the same nasal root in Chinese, Tibeto-Ultraindian and Dravido-Australian. In the Naga *thien-ang*, *thien-o*, *thien-a*, *I put*, *thou puttest*, *he puts*, *ang* is as evidently the 1st pronoun *nga* in a postfixed euphonic form, as *o* is the 2nd and *a* the 3rd. In Bodo *ang* is the separate form (see other examples *ante*, p.p. 37,38). It would therefore seem that in such Gyarung uses as *kazang* [= *ka zo* + *ang*] "I eat" (radically "the-eating-my"), -*ang* is identical with the Naga -*ang*, that is, the 1st pronoun itself. Gyarung may have lost the postfixed pronoun in the 2nd and 3rd persons. That it once possessed them and that they were emphatic repetitions of the preposed pronouns is rendered highly probable by the existing usage of the closely related Dhimal which retains them in the 1st and 2nd persons, but wants them in the 3rd. Bodo again wants them in all the persons while Namsangya Naga preserves them in all.* The usage in Gyarung must be of Scythic origin like the other Scythic traits which the Tibetan formation acquired from its contact with Scythic in its native province and retained in variable degrees in its Ultraindian dialects.

A few examples will serve to illustrate the Gyarung system of composition. From the crude root *zo*, *eat*, (or rather *eating*) are formed with the prefixed definitives *ta-*, *da-*, *ka-*, *ya-*, *na-* the substantive or participial *ta-zo*, *ka-zo* &c. From *ka-zo*, by the postfixing of *nga* in its euphonic form is obtained *kaz-ang*, *my eating*, [primarily doubtless *nga ka-zo nga*, like the Dhimal *ka lađe khi*

* At the conclusion of chap. iv. I remarked with reference to the emphatic and euphonic postfixing of the pronoun. "It is not a trait that we should expect to find spontaneously shewing itself in many languages, and it is more likely to have been derived by the Gangetico-Ultraindian tongues from a highly harmonic group like the Dravirian or Fino Japanese, than to have originated close to the monosyllabic boundaries in such a language as the Naga, and been thence transmitted to more remote and harmonic members of the postpositional alliance." I added that if the trait were a native Indian one it probably arose in the Dravirian family and was communicated by it to the Gangetico-Ultraindian. It may now be considered that this habit, with much of the harmonic and agglutinative tendency which I had attributed to Dravirian influences, was imported by the Gangetico-Ultraindian family from its native location in Eastern Tibet, where it was adopted from Scythic.

ka and the analogous Scythic forms]. With *-ti* or *-si*, which Mr Hodgson terms "the participial attributive suffix" and which is evidently the common definitive demonstrative &c, found in the same form as a prefix and occurring in *chi-di* "this," *ha-di* "that"* (*Bhotia wr. ha-de, de, sp. di. phi-di*), the compound becomes definitive or substantival *ha-z-ang-ti* "the I eating," "I who eat," "I the eater." With the causative particle *sa* prefixed to *zo* it becomes *sa-zo* or definitively *ta-sa-zo* "feeding," *ta-sa-z-ang-ti* "I who feed;" and with the negative definitive *ma-sa-z-ang-ti* "I who feed not." *Ta-sa-ze-si* according to the context is "he (or thou) who feedest," the pronoun not being postfixed. From the root *ma* or *man*, *sleep* (*nan* in Thochu) are formed *ka-r-man* "sleep," *ka-r-ma-ng* "I sleep," *ma-r-ma-ng* "I sleep not." The repetition of the definitive in the form *ta* forming the past or completive we obtain *ka-ta-r-ma-ng* or *ta-ta-r-ma-ng* "I slept," *ma-ta-r-ma-ng* "I slept not," *ta-ta-r-ma-ng-ti* "I who slept," *ma-ta-r-ma-ng-ti*, "I who slept not," *ta-ta-r-me-ti*, *ma-ta-r-me-ti* "thou (or he) who slept" or "slept not." As an example of the cumulative definitive prefix I may give *da-na-r-ta-sa-gyu-ng-ti* "I who cause to run," i. e. *gyuk run*, or *running*, *sa-gyuk*, *make-running*, *da-na-ra-sa-gyuk* (triple def.) emphatic "the," "this," "am," making-running, *ng-ti*, "I-who" or "I-the."

The following additional example shews that in Gyarung as in Bhotian the object precedes the assertive. Ngare nga-pe boroh dovo-ng, "I my-father horse give-I."

The pronoun when used objectively in the imperative has the same form as when used agentively in the indicative, *davo-ng* "I give" or "give me." (Hodgson 66).

Horpa has also the postfixed 1st pron. in the same objective form *ta-khye* "give" *ta-kh-ong* "give-me." Thochu prefixes the pronoun *da-goh* "give," *kwu-goh* "give me."

Save in those points in which the Scythic inversive collocation departs from the Chinese there are few traits in Gyarung or in Bhotian which may not be considered as fundamentally Chinese.

* See Sec. 3 for the various forms and uses of this definitive. It varies from *tí, thí, sí, dī, de* to *ri, re, ra* &c. As the relative it has the following forms *shu, shui, si, sui, chi, chui, ti, tiang* &c, Chinese; *thi-nda* Bhotia; *sui-u* Serpa; *ha-di* Lhopa; *sa-re* Lepcha; *u-ti* Limbu; *sa* Kiranti; *te-kwe* Sunwar; *su* Giarung, Newar.

The habit of treating words as crudes, of placing a series of crudes together and indicating the common relation by a single postposed particle is Chinese as well as Scythic. Even the compounding of particles is but a remnant of the crude Chinese stage when the formatives and flexions did not exist, and when complex relations were indicated by several unconnected crudes or particles. Some of the ordinary Chinese definitives and prepositions are double, and repetition and cumulation are much used in the general structure of the language. The Tibetan languages generally may be described as sister dialects of the Chinese, in some traits standing between Chinese and the Mon-Anam family, but in their general structure Scythico-Chinese, the distinctive Scythic traits being probably secondary or acquired. If the pronouns and particles had been Scythic more than Chinese we might have recognised in Tibetan the genealogical link between the former and the latter. But as the reverse is the case, the glossarial basis of Scythic must be considered as representing that archaic dialect—allied to the Chino-Tibetan but distinct from it—in which the inversive structure was developed, and from which it was transmitted to the western or outlying branch of the Chino-Tibetan family.

Sec. 3. PRONOUNS.

1 *Bhotian.*

The 1st pronoun of Bhotian, *nga*, *na* is Chinese, *n̄g*, *ngai* &c, and although not now a prevalent Turanian form its wide diffusion in archaic eras is proved by our finding it in the Dravido-Australian, Caucasian and Semitico-Libyan formations, and in N. E. Asian, and American formations. Other formations are also used. The honorific *nged*, is distinguished by the slender vowel and the dental postfix found also in the 2d pron. The form *nge* occurs in the Lhopa oblique forms *nge-yi*, in the adjacent Takpa as the regular form *nge*, also softened to *nye*, and in the oblique form of Singpho, *nge-na*. It is not probable that in the Tibeto-Ultramindian province the *e* form originated in Bhotian and in Tibet was confined to that dialect. It appears to have been an archaic Tibetan form current with *nga* and *ngo*. *Ngo* itself, the current Chinese form, is no longer found in Tibet, but its former existence there and its antiquity are attested by the Abor-Miri *ngo*, Lepcha

and Sunwar go, Tiberkhad geo, Milchanang and Sumchu gu, which cannot have been directly derived from the Chinese ngo, ngu, ngoi, gu &c. In like manner the prevalence of e and i forms in the eastern Takpa, in Mikir, in some of the Naga dialects, in Tunglhu, in some of the Nipal dialects and in Tiberkhad shows that they were widely diffused at an ancient period, and that they cannot be referred to the modern spread of Bhotian across the Himalayas. In a previous page, while adverting to the difficulty of distinguishing between the Dravirian and Tibetan forms in e, i, I observed that in Dravirian the slender forms had been produced by the incorporation of a possessive i, e, with the pronoun, while the Tibeto-Ultraiudian appeared to have incorporated a plural i, and were hence regularly or most commonly found in the plural only. The Takpa, Kinawari, Tibetan and Mikir e forms I attributed to a purely phonetic substitution of e for a. It is hardly possible to decide to what extent the variations may be simply phonetic as in the Chinese ngoi, ngai, ngei, but it certainly appears probable that in Tibetan the variation of nga to nge, ngi was originally an assimilative or incorporative plural form analogous to the Scythic. As Tibetan has also a ni, i, possessive postfix a similar variation may have been also possessive as in Scythic and Dravirian. The Kinawari Bhotian nga singular, net pl. suggests that ne was an archaic pl. form, and its honorific use in the Tibetan Bhotian nged might be explained in accordance with this, the use of "we" for "I" being the most prevalent honorific idiom in the 1st pronoun. The Serpa nga s. ni-rang pl., Gurung nga s., ngi-mo pl., Dhimal ka s., ky-el, pos., ki-ng pl., (2d pron. na 2., ni p.), Garo ang s., ning pl., Naga nga s., ni-ma pl. and some of the other forms given in the Table (chap. v. sec. 11) are strongly in favour of the archaic Tibeto-Ultraiudian having possessed an incorporative or assimilative plural in i, e. The Lhopa nga nom, nge-yi peu (2d pron. chlu n, chhe-gi p.), shows how possessives might be formed in the same way by the euphonic assimilation of the radical vowel to that of the postfix. Mr Robinson gives rang, dag, and kho as other forms of the 1st pron. The 1st is the reflexive affix ("self"), the 2d is the plural particle, and the 3d is the 3d pronoun used for the 1st. The 2d pron.

khyod *nr.*, *khe sp.* is not the prevalent Chinese *ni*, *na* &c. like the *Si-fan* and common *Ultraindo-Gangetic* terms. It appears to be an archaic Chinese or Chino-Scythic form, and a variety of the same Chino-Scythic definitive that is used in Bhotian as the 3rd pron. The Chinese *ju*, *jo*, may be a variety of the same archaic form. The Sokpa broad form of the Scythic 2d pronoun *chha* is identical with the Newari *chha* and the Kiranti *kana* preserves the same vowel.* The Bhotian *khe* has the common slender vowel of Scythic (*i*, *e*) and the same vowel is found in the N. E. Tibetan dialect of Thochu *kwe*, in Limbu *khene* and in Garung *ken* which preserve the Scythic pronominal postfix (comp. Yakuti -*ghen*, -*gen*, -*ken* and the current Scythic *sen*, *sin*, *sina* &c.) The Thochu has also a form in *a*, *kwa*, corresponding with the Sokpa, Newar and Kiranti. In the Bhotian *khyod* the root is *khyo* or *kho*. *T* being a common Bhotian augment Kinawari has *keot*, *kherung* in which the root is *keo*, *khe*. Serpa has *khyo*, *khye*. The -*d*, -*t*, of Bhotian and Kinawari is a postfix not found in the 2d pron. of other languages of the alliance, and only occurring in the 1st pron. in the exceptional Bhotian honorific *nyed*, Ladak and Kinawari Bhotian pl. *net*, in both of which it may be a form of the plural dental and sibilant postfix (comp. *en-eshe* Tiberkhad). In *khyod* it may be merely a Tibetan augment or postfixed definitive, corresponding with the -*s*, -*t*, -*d*, -*k* found in some of the Tibeto-Ultraindian varieties of the Chinese numerals. If not a mere phonetic augment, it would appear to be a Scythic trait and to correspond with the nasal postfix of the Scythic pronominal system which occurs in Limbu *khe-ne*, Kiranti *kha-na*, and Garung *ke-n*. A similar postfix was probably current in the Tibetan dialect from which this form of the 2d pron. was derived. The Bhotian *d*, *t* may be merely a variation of *n*. In one of the Samoiede dialects a similar replacement of the Scythic -*n* by -*d* takes place, to-*di* (comp. the Ugrian to-*n* &c).†

* In a later page the connection of the Sokpa pronoun with the Scythic on the one side and the Tibeto-Himalayan on the other is examined.

† The current Chino-Tibetan numeral 2 is the same liquid def. that forms the 2nd pron., *li*, *ni*, *urh* &c. But in the Tibetan 8 (4, 2) a form of 2 occurs which has a considerable resemblance to the Tibetan 2nd pron. *gyud*, *gyet*, *gye*, in Lepcha *ken*. It may however be merely the current 2 *ayis*, Lepcha *nyet*, Burman *whit* with the *g*- pref. and *n* elided. If *gyu*, *gye*, *ken* be a Chinese def. it is similar to the unit preserved in 9 *kin*, *kyen* &c. The existence of an archaic Chinese dialect in which the same def. slightly varied or doubled entered into 2 as well as 1, would be in accordance with Scythic and N. E. Asian analogy.

The 3d pron. is *kho*, *khu*, in *Lhopa kho*, *Serpa khwo*, *Lepcha heu*, *Limbu khune*, *Magar hos*, *hoch*. The regular vowel is *o*, *u* and this alone distinguishes the root from the more prevalent form of the 2d pron. which has *e* as its proper vowel. The only analogous pronouns in the adjacent languages are the *Thochu kwan*, and *tha-cha* and the *Sokpa* and *Gyami tha*.

All these varieties are Chinese. *T'ha* is current in *Kwan-hwa*; *ki* in *Shanghai* (also *gi*) and *Chio-hu*, and in the contracted form *i* it is common to *Kwan-hwa*, *Shanghai*, *Tie-chiu* and *Hok-kién*; *ka* is *Kwan-hwa* and *khui Kwang-tung*. *Ke*, *ken*, *kene* [comp. *Lepcha peu*] are other varieties. The *Bhotian khu*, *kho* and the allied *Tibeto-Ultraindian* forms are most closely related to *khui* and this is consistent with the affinities of the numerals which are also in the full archaic Chinese forms best preserved in *Kwang-tung* and some of the other southern and central Chinese dialects. The dental with the slender vowel is a demonstrative in *Shanghai ti*, "*this*" and *Kwang-tung*, *deng* "*that*." "*This*" is *che* in *Kwan-hwa*, *chi* in *Tie-chiu*, *chit*, *chia* in *Hok-kien* and *koi* in *Kwang-tung*. *Burman* like *Bhotian* has a broad form *thu*, and *Lau* has it gutturalised *khon* as well as in the dental form *tan*, corresponding with the *Changlo dan*. The Chinese slender forms are found in *Manyak thi*, *Gurung thi*, *Murmi the*, *Kinawari te*, *Lepcha he*, *Naga a-te*, *a-ti*, *Singpho khi*. *Thi* occurs in *Burman* also but as a demonstrative "*this*." The same root is the prevalent *Scythic* 3d pron. varying to *s*, *h*; *ta*, *tam*; *han*; *son*, *zo*; *ten*, *teu*, *ze*, *se*; *sin*, *tida*, *di*, *kini* &c. *Mongolian* has *e-gun* corresponding with *khune* of *Limbu*. The dental form is also *N. E. Asian*, *cha-ta Yenisei*, *tun-dal Yukahiri*, *tana*, *taan Aino-Kurilian*, *tana* (*Sanskrit tad*) *Namollo*, *tie*, *tugh Kamschatkan*, *tsyö*, *dsee Korea*. *Japanese* has the guttural form *kare*.

The *Bhotian* root of the 2d and 3d pronouns may be considered as Chinese and *Chino-Scythic*. Its use for the 2d pron. is not Chinese, but *Scythic*. Possibly it may have displaced the common *Chino-Tibetan* and *Ultraindian* root in the 2d through the influence of *Sokpa* or another *Scythic* dialect. Its absence in all the *Tibeto-Ultraindian* dialects save *Bhotian* and the few *Himalayan* dialects that have been much affected by *Bhotian*, is in favour of its having always been confined to that dialect and of

its not being archaic even in it. The identity of the Sokpa and Newar pronouns is also consistent with its recent introduction. But the Bhotian form, its connection with the 3rd and the archaic Chinese character of the latter, make it probable that the west Tibetan system is archaically connected with Scythic as well as Chinese. The other evidences of an archaic connection with Scythic are too numerous to render the presence of a 2nd pron. analagous to the Scythic anomalous. That the connection between the 2nd and 3rd pronouns is Scythic will appear by comparing the Thochu kwa, kwe 2nd, kwan, tha-cha 3d; Bhot. khyed, khe 2nd, kho, ku 3rd; Lhopa chhu 2nd, kho 3rd; Lepcha han 2d, heu 3rd; Serpa khyo 2d, khwo 3d; Limbu khe-ne 2nd, khu-ne 3rd; Kiranti kha-na (Newar chha) 2d, mo-ko 3rd; with the Mongolian chha 2nd, tha 3rd of Sokpa; the Turkish ghen, -ken, -gen (verbal) 2nd, kini 3rd of Yakuti, sin 2nd, kin, -sin-si, -i 3rd of Osmanli &c; with the Tungusian si 2nd (i, pl.), tohe 3rd of Manchu, si, sin, s, 2nd, in, (pl. tin) 3rd of Nyertshinsk; with the Ugrian sina, sa, si, ton, tin, te, d, t, k, &c 2nd, han, nsa, sa, son, sya, tida, s, si, t, d, ka, ja 3rd; and with the Samoiede tan 2nd, tam, tap 3rd, pu-dar 2nd, pu-da 3rd, -t, -th, -d, -dh, -r, 2nd and 3rd.

The same root is common as a demonstrative, relative, interrogative and locative in the Chinese and Tibeto-UltraIndian vocabularies. "*This*," tsz, che Kwan-hwa, ti Shanghai, chi Tie-chiu, chit, chia Hok-kien, koi Kwangtung; cha Thochu, chi-di Gyar., thu Many., wo-chu Takpa, de, di, re Bhot. &c, kon Limbu, chun Murmi, tho Newar, chun yo Gurung. "*That*," ki Kwan-hwa, i, ku Shanghai, deng Kwang-tung, tha Thochu, wo-tho Takp. (wa Hok-kien, pi Kwan-hwa), gua-thu Many., de, re Bhot. &c, khen Limbu. "*Who*," shui, shu, sa, si sui, chi chui, ti tiang &c Chinese. "*Which*?" su Thock., Gyar., Hor., Many., Takp., gang, khang, ka-di Bhot. &c, kha, ko Kir., kha Murm., gu, su Newar, su Gurung, kos Magar. "*What*?" thu Gyar., si Takp. achin Horp., chi Bhot., khang, kan Bhot., shu, chhu, ta, the, di, de, tigi, hi Himalayan. The guttural forms are Bhot-Himalayan (Bhotian, Limbu, Kiranti, Murmi, Magar). Forms in *u* are found in Manyak, Gyarung, and Horpa, as well as in Bhot-Himalayan. The slender forms in *e*, *i*, it will be remarked, are also current in Bhotian.

The plural postf. -chag has the form -dag with substantives. In Lhopa it is contracted to -cha, and in spoken Tibetan varied to -jo or -njo. It would probably be more correct to consider the final -g as the common Tibetan final augment, corresponding frequently with the softer -ng, *n*, *r* of other languages of the alliance, but it may be the guttural Scythic pl. def. as in the Horpa ri-gi. The root cha, da, jo is the widely prevalent Scythico-Tibetan plural particle. Comp. the Scythic forms in t, k, g, d, s, z, ch, r, n, l, all variations of t (*ante* vol. viii, p. 204), and corresponding with the Chinese tu, su, shu, chu, chung, chai, tang, teng, tse, with the Manyak -du-r, -ju, Bodo -chu-r, Burman -do, -to, Serpa ra-ng, Garo -ra-ng da-ng, Horpa ri-gi, Magar ri-k, Bengali di-g, Tiberkhad a-tu-ng, Kinawari ta-m, ta (in tam-she, ta-she, from the Chinese double pl. tang-tse). The vowel of the spoken Tibetan corresponds with the Manyak du, ju, Limbu yu, Bodo chu, Mongolian od, Chinese tu, Burm. to, do. The written form may be referable to the Chinese tang, like the Kinawari and Changlo tam, but it is also Mongolian -da (Buriate) and Manchu ta.

The poss. -ki, gi, kyi, hi, yi is the common Gangetic, Ultraiudian and N. Indian guttural found also in Chinese, tih or teik, che, te, ku, ko, kei, koi, keu, ge, e. It occurs in the adjacent Tibetan dialect of Thochu, k.

2. Horpa.

Mr Hodgson informs us that the Hor-pa occupy the western half of Northern Tibet, "and also a deal of Little Bucharra and of Songaria, where they are denominated Kao-tse by the Chinese and Ighurs (as would seem) by themselves." "In southern Tibet there are numerous scattered Hor-pas and Sok-pas as there are many scattered Bod-pas in northern Tibet." (p. p. 122, 123). Further on he remarks that on the evidence of his vocabularies the Sokpo of the Tibetans are the Olet or Kalmak Mongolians of Remusat and Klaproth "whilst their confrères the Horpa are almost as evidently Turkish, the Turkish affinity of the latter being inferred, not only from the vocables, but from the complex structure of Horpa verbs and from the quasi Arian physiognomy of the samples he has seen of the Horpa race." Professor Müller has remarked that by its pronouns and numerals, it is Bhotiya (i. e. Tibeto-Ultraiudian) and he has accordingly ranged it provisional-

ly as the most western branch of the Trans-Himalayan dialects of that family. Both pronouns and numerals undoubtedly belong to the derivative Chino-Tibetan system, but they have some peculiarities when compared with the other known Tibetan languages.

The 1st pron. *nga* is the Gyarung and Bhotian form of the Chinese.

The 2nd, *ni*, is not Bhotian and it differs from the Gyarung *nan*, *na*, and Manyak *no* in its possessing the more prevalent of the Chinese forms (*ni* Kwan-lwa &c, found also in Gyami). This form is comparatively rare in the Tibeto-Ultraiudian dialects. Takpa *i*, Dhimal *ni*, Deoria Chutia *a-ni*. The *e*, of Namsang Naga and Burman is probably a variation of *i*.

The 3rd pron. *vja*, *vja* (in pl. *vji*) is peculiar. It appears to be a variety of the Scythic sibilant (and dental) 3rd pron. (comp. Ugr. *sya*, Sam. *di*, &c) corresponding with the Magyar *ja*.

The plural postfixes are *-ni* (Thochu, Sokpa &c, *supra* p.); and *-rigi* or *rigya*, the first element of which is either a native variation of *ri* or the Manchu *-ri*, while the second is the widely prevalent *-ki* &c (Chinese, Scythic &c). Manchu has a similar pl. *-jer-gi*. The possessive is formed by an elongation of the vowel of the root, *ngua*, *ni*, *vjaa*, an idiom the same as the Newar locative ("in," "on") and analogous to the Bhotian and Garo repetition of the final sound of vocables when used assertively.

The prefixal *v-* of the 3rd pronoun is an example of a usage which is found in other words and is distinctively Tibeto-Ultraiudian of the curt Bhotian type.

3. *Thochu*.

The Thochu pronouns are:—

1st *chi*, *ka*; 2nd *kwa*, *kwe*; 3rd *kwan*, *tha-cha*.

Ka (1st)—probably a variation of the common Tibetan *nga*—is found in Dhimal and in the oblique form of Lepcha. The change from *ng* to *k* also takes place in Naga, *-ak* for *-ang*. Similar guttural forms are found in Milchanang, Tiberkhad, Naga, Khyeng, Kyan, Silong and Lau.

Chi (1st)—recurring in the Newar *ji*—is a remarkable term as it has no direct or apparent affinity with the Bhotian *nga*, *na*, the Chinese *ngo* &c and is still more remote from the Scythic labial. But it is highly improbable that it is a distinct root. The *ch*

appears to be merely a variation of *h*, for in the plural and dual forms *chu-k-lar*, *chi-ki*, *che-un* the *h* is absent altogether. In the possessives there is a similar alternation of the two forms, *ka-k-chi* "mine" *chi-k-uh* "our's". These variations give us *chu*, *chi* and *che*, or gutturalising them and adding the current guttural form, *ka*, *ku*, *ki*, *ke*, analogous to the Ultraindian series, *ka*, *ku*, *ki*, *ti*, *gi*, *geo*, *he*, and to the Chinese *ngai*, *ngoi*, *ngu*, *ngei*. The vowel of the 2nd pronoun like the 1st varies from *a* to *e* in Thochu. The root occurs in the form *ti* in Mulung and Tablung, and the guttural forms also take *i* in Tiberkhad, Milch, Khyeng, Kyan and Silong. Joboko Naga has *ke*. Some of these forms are plural, and probably the primary *i*, *e*, form was plural* 2nd *kwa*, *kwe*, "thou" is similar to the Bhotian *khyod*, *khe* (in Himalayan dialects *khe*, *ke*, *ki*, *kha* &c.)

The first of the words given for the 3rd pronoun, *kwan*, appears to involve the root of the 2nd pron. with final *n*. In Bhotian as in several other formations the same definitive is a common element in the 2nd and 3rd pronouns, Bhot. written 2 *khyod*, 3rd *kho* spoken, 2nd *khe*, 3rd *khu*, Serpa 2nd *khyo*, 3rd *khwo*. In the last form the vowel has the amplified Thochu form of *kwa*, *kwan*. 'Tha-cha "he" &c is composed of two vocables or forms of the same root. Tha is *Sokpa*, Gyami and other Chinese dialects and in the slender form the Chinese. In the forms *ta*, *da*, it is also Seythie, Manyak &c, *thoi* Dhim., *ate* he &c Naga, (*thi* Burman "this," also Murmi, Gurung, Bhot. demonstrative *cha* is but another form of the same definitive). It occurs as a variation of the prefix *ha*, *ta*, in Ultraindian vocabularies.

Thochu has three plural postfixes, which occur both separately and conjoined as in some Seythie pronominal systems -*ni* (*Sokpa*, *Horpa* -*ni*, *Manchu* -*ri*, *Horpa* *ri-gi*, *Ostiak*, *Yeniseian*, *Yukahiri*, *n*, *Ultraindo-Gangetic* *ni*, *in*, *li*, &c. *Da*, *ir*, *n* &c); *ki*, *ko*, *ku*, *k*; and -*lar*. *Ki*, *ik*, is Chinese and Seythie (*Chin. ki*, *Hungarian* -*ek*, *Turkish*, *N. E. Asian*.) It recurs in *Sunwar* -*ki*. In the *Kasia* definitive *ka* sing., *ki* pl. the *i* by itself is plural, as in Seythie. *Kol* has *ko*, *Gond* *k*, *g* &c. *Lar* is *Turkish* *lar*, *ler*, *Mongol* *nar*, *ner*, *Kol* *nar*. *Kwe-ni-ko*, *kwa-ni-k lar* "ye" are examples of the single, double and treble plurals. *Lar* has obviously been the latest

* See the preceding remarks on the Bhotian 1st pron.

acquisition as in the Turkish *b-iz-ler* "we," *s-iz-ler* "you"*. The Dravirian *-käl*, *gal*, *-ngal*, *-kulu*, Dhimal *-galai*; Naga *-khala*, *kara* combine two of the roots. *L, r* without the *k* is Dravirian as well as Scythic, and common in Ultraindo-Gangetic languages e. g. Takpa *-ra*, Abor *-lu*, Dhimal *-al*, *-el*, Mikir *-li*, Garo, Miri, Serpa *-rang*, Bengali *-era*. These forms and those in *n* are variations of the same root.

There are two possessives *-chi* and *-k*. *Chi* is Chinese *-ti*, Serpa *-ti*, Tengsa Naga *-chi*, Dravirian *-di*, *-ti* &c. The possessive *k*,—which may be radically the same as that in *ch*, *t*—is Chinese *ko*, *ku*, *keu* &c, Bhotian *-kye*, *-gi*, *-hi*, &c, Takpa *-ku*. It is very common in the Ultraindo-Gangetic vocabularies *ko*, *ku*, *ke*, *ki*, *ka* &c. Ex. of the Thochu possessives, *ka-k-chi* "mine," *kwe -k-chi* "thine" *tha-k-chi*, *kwana-k-chi* "his," *chi-ku-k* "ours," *kwa-ni-ku-k* "yours," *tha-ku-k* "theirs."

4. *Gyarung*.

The Gyarung pronouns are—

1st *nga*, *nga-yo*. Horpa, Bhotian, Namsang Naga Kasia, Burman; Murmi, Gurung, Magar, Serpa. The Chinese form is *ngo* found in Abor-Miri and with the consonant gutturalised in Lepcha, Sunwar and Milchanang (*go*, *gu*).

2d, *nan-ra*, *na†*. This pronoun like the Manyak *no*, differs from the Bhotian and Thochu. It is a variety of the Chinese *ni* (also Horpa) found in the Shanghai dialect *na*, *nong* and in the ancient Kwan-hwa *nai*, *nei*. It is also Ugrian in different Chinese forms, (*nan*, *nei*, *num*, *nyn*), and in the slender Chinese and Ugrian forms *ni*, *ni-n* it is Dravirian and Australian. The varieties *na* and *nu* are also found in Draviro-Australian. The Gyarung forms *nan*, *na* are the common Ultraindo-Gangetic ones, *nan*, (more frequently *nang*), *ngar*, *nga*, *na*. From the great and wide prevalence of the forms in *a*, *an*, they appear to have preceded the dissemination of the Manyak variety *no*.

* This merely mechanical heaping of particles is a Scythic habit and not merely Tatar and Tibetan. Thus in the Hungarian *m-i-e-n-k* "our" the pronominal root occurs twice, *m* and *n*, and each time with a different plural postfix, *-i*, *-k*, the two being connected by the possessive particle, *e*.

† *Ni* is given in the Voc. as the poss. prefixal form, but this appears to be a misprint as Mr Hodgson elsewhere (p. 33) speaks of *na* as the poss.

The 3d pronoun is *wa-tu* sep., *wa* pref.* *Wa* is the labial def. 3d pron. &c, of Bhotian Scythic and N. E. Asian and of Dravido-Australian (also Caucasian, Semitico-African &c.) The Gyarung form and varieties of it are common in the Ultraindo-Gangetic vocabularies (*wa* Dhimal, Garo &c). The Ultraindo-Gangetic forms in *u* (*bu* &c) are probably from the Tibetan *mo*, *vo* &c. The postfix *tu* is the universal dental def. Varieties of it occur also in *thu* "*anything*," Gyar. and *su* "*anybody*" "*which*," "*who*" Gyarung, Tib., Thochu, Horpa, Takpa, Manyak; Takpa and Horpa have also slender forms *achin*, *si*. It is common in various forms in the Ultraindo-Gangetic languages. In the plural *ya-pos* the root is not a variation of *wa* but of the Horpa *ja*; *jya*.

The plural particle appears to be *-pos*, *nga-pos* "*we*," *ya-pos* "*they*," is probably a variety of the labial Chino-Ultraiudian *mun*, *me* &c., Gurung *-mo*. The Magar *-hos* is probably a modification of *-pos*.

The possessives are simply the roots *nga*-, *na*-, *wa*-, prefixed.

A further pronominal element *yo* occurs, but from the transposition of some of the words in the printed Voc. its real power is somewhat uncertain. The forms given are *nga-yo* "*I*," *yo* "*we*," *nyo* "*you*." It might be thought from the last two that *yo* was a plural particle, and from the first two that it was a root for the 1st pron. corresponding with the Chinese *yu*. It occurs in the Horpa *su-yo*, (Manyak *su-ye*) "*anybody*" (Gyar. *su*, Takpa *si-rang*, Thochu *song-wan*.) If these forms stood alone the *-yo* of *nga-yo* might be considered as a singular or common definitive used to emphasise the pronoun. But in Lepcha it is a plural postf. (*-yu*). The spoken Bhotian plural postfix of the pronouns *-njo* appears to be the same particle and it is also found in the Manyak dual *-ju*. Lastly, in Bodo which has special glossarial affinities with Gyarung and Manyak, it occurs in the nasalised form *jong* as the plural pronoun, corresponding with the Gyarung *yo* and Manyak *a-ju*. If we have correctly traced the etymology of the Manyak *ju* and *dur*, all these plural forms are variations of the archaic Tatar numeral 2.

* The Voc. gives *nga-pos*, *wa-tu*, but the former is obviously the plural of *nga* "*1*" transposed.

5. *Manyak*.

The Manyak pronouns are :—

1st, a ; a contraction of the Tibeto-Ultraindian nga, ang, ak &c found also in Naga (Angami and Mozome Angami) and (in the pl.) in Mikir.

2d, no ; a variation of the more prevalent Sifan-Ultraindian na (Chinese) such as occurs in Chinese (nong) and Dravirian dialects (nn, un). The same variety is found in Abor, Deoria Chutia, and Naga (Angami and M. Angami). The 3d pron. thi is Chinese (Gyami has the broad form of Chinese, tha). The same variety is possessed by Gurung, and a slight modification of it by Murmi the ; Naga ate.

The plural postfixes -dur (whence Bodo -chur). The root is the same as in the Mongolian -od &c (Chinese tu Burman to, do, euphonic) with final -r as in the Mongol, Turkish and Thochu na-r la-r, k-la-r. But it is directly referable to an archaic Scythic form of the numeral 2, current in Tungusian, djur, dsur, juo and Caucasian zur (Lazian), and preserved also in 4, that is 2 dual, in Turkish dor-t, tuor-t, Mongolian dur-ban (Sokpa tir-ba), and Indo-European ka-tvar-as, ke-tur-i, pe-dwar &c. In the current Mongolian 2 it exists under the form yur, yor (ko-yor, in Sokpa ho-yur). Manyak has also a dual form of the 1st pronoun, a-ju. The postfix ju is evidently a variation of the same numeral as in the Manchu juo. The use of the Tatar numeral root 2 as a dual and plural postfix cannot be referred to any recent era of that formation. It points at an archaic connection between it and the Tibetan. The use of a dual form distinct from the plural is itself a piece of concurrent evidence, for the dual is wanting in the Tatar languages in their present form although preserved in some languages of the Ugro-Fin branch of Scythic (Lap, Kamass, Ostiak, Samoiède, *ante* p. 22). The origin of some of the most widely prevalent plural particles in the numeral 2 has been noticed in other portions of this enquiry.

The possessive is -i or -e which is Scythic -i, -e, (Mongolian and Manchu -i) Tibetan -i &c, Burman -i, Dravirian -i, -e.

6. *Takpa*.

It is not quite clear whether this dialect is spoken in any portion of the northern side of the Himalayas. The Towung raj is on

the upper habitable portion of the southern to the east of Bhutan. But as it has Bhotian dialects on at least two sides, and is politically and ethnically connected with Tibet and not with Asam, I will give its pronouns and particles here. In its general character it is more Sifan than Bhotian, but it has many purely Bhotian vocables and even some Bhotian particles, the presence of which is explained by the long predominance of the Bhotians in this portion of Tibet, their extension to the southward over Bhutan, their conquest of the Takpa province, and the retention of it by the Tibetan Bhot after their relinquishment of Bhutan.

1st pron. *nge, nye*. See the remarks on the *e* forms of Bhotian &c.

2nd *ni*, Chinese like Horpa.

3rd *pe, be*, a current Chinese form, the Gyarung *wa* being a variation of the same root. The plural postf. *-ra* is an element in the Horpa *-ri-gi*. The poss. *-ku* is one of the Chinese forms.

7. *Sok-pa*

I notice this vocabulary because it is the only Scythic one with which any of the known Tibetan dialects are now in contact. It is important also as the modern and existing illustration of one of the great standing facts of the ethnology of Upper Asia, the mutual influence of Scythic and Tibeto-Chinese, and it acquires a still greater interest when it is found that the partially Scythic structure, phonology and glossary of the Tibetan dialects cannot be ascribed to it and consequently indicate an archaic connection with a different branch of Scythic.

The Sok-pa vocabulary is Mongolian. The 1st pron. *mi, bi, abu*, is the common Scythic labial and none of the Tibeto-Ultramontian roots are related to it. The 2nd pron. *chha*, appears to be connected with the guttural of Thochu, Bhotian and the Nipal dialects. Newar has the same form *chha*, while Lhopa has *chhu*. As the Sokpa poss. has the form *chhi-ni* it is probable that it is a variation of the Scythic *si* (comp. Bariate *s'i, c'i* &c in poss. *s'in, s'ini* &c.) In Samoiede the prevalent vowel, *i*, becomes *a, o*, (*tan, toti* &c) and some of the Ugrian dialects have *a* or *o* in the pl. The variation of *s* and *t* to *k* takes place in Scythic languages in the 2nd pron. as in other vocables. It is found in some of the Ugrian, Samoiede and Yakuti forms,

The plur. -ni is Horpa, Seythie &c (*ante* p. 47.)

The Sok-pa 3rd pron. tha' is Chinese, Gyami, and Thochu. A def. postfixed to some substantives in the forms -kwe, -khe, -gwe, -ge is identical with the Thochu 2nd and 3rd pronouns kwe, kwa, and with the Bhoto-Himalayan 2nd pronoun khe, ke, ka.

The miscellaneous Sokpa vocabulary abounds in Mongolian words. It has received a few Tibeto-Ultraindian, and communicated some to Bhoto-Himalayan, but the latter are so few as to show that the two races have not been long and intimately connected. A few Sokpa words appear to have been carried across the Himalayas, e. g. the Sunwar khweli "*foot*," Sokpa khoil; ne "*name*," Sokpa nér. The Bhotian 7 is Mongolian.

8. *The mutual connection of the Tibetan pronominal systems, and their relation to the Chinese and Seythie.*

The Bhotian 1st pron. is Chinese, the vowel however being not the current Chinese *o*, but *a* which was probably archaic Chinese also, as it is N. E. Asian and Dravido-Australian. The 2nd and 3rd deviate much more widely from the current Chinese forms, and appear to be archaic Chinese and Seythie. They are both applications of the same primary definitive.

The Horpa 1st pron. is the same as the Bhotian. The 2nd is a current Chinese variety and evidently not connected with the Bhotian. The 3rd is peculiar and Seythie or Chino-Seythie.

The Thochu pronouns, the most northerly of the East Tibetan, are much less closely connected than the Gyarung with the prevalent Ultraindo-Gangetic. They are akin to the less diffusive Bhotian, and like the Bhotian depart considerably from the forms common, with little variation, to Chinese, Si-fan, Ultraindo-Gangetic and Dravido-Australian. The plural and possessive particles are Chinese and Seythie and some of them appear to be of comparatively recent Tatar introduction.

The Gyarung pronouns are varieties of the Chinese, the 1st being the same as the Horpa and Bhotian, but the 2nd being distinct from the Bhotian and identical with Shanghai forms as the Horpa is with the Kwan-lwa. The Gyarung forms of the Chinese pronouns are entitled to be considered as constituting the normal or distinctive and predominant Si-fan and even Tibetan system, as the Thochu and Bhotian 2nd pron. is very abnormal.

and the Manyak are evidently contractions and variations of the Gyarung. The great prevalence of the latter in Ultraindo-Gangetic vocabularies shows that they were spread to the southward as the regular Si-fan forms, before the exceptional Manyak and Bhotian were produced, or at least before they began to be disseminated abroad. The Gyarung plural particle appears to be also Chinese and not Seythic like that of most of the Tibeto-Ultraindian dialects. The 3rd pron. *wa* is a variety of the Chinese labial 3rd pron., *pi* Kwan-hwa, still current in Hok-kien as a demonstrative, *wa*, *that*. The Chinese slender current form is found in Takpa *pe*, *be*, Dophla *bi*, Naga *mi*, *me*. This 3rd pron. is Seythic as well as Chinese. Seythic *bi*, *wi*, *pu*, *bu*, &c (Abor *bu*). It is also Dravido-Australian.

The Manyak pronouns, 1st *a*, 2d *no*, are varieties of the Gyarung and the same varieties are found in the Ultraindo-Gangetic languages (Abor, Naga). The 3d pron. is not Bhotian but Chinese and the same variety of Chinese is found in Gurung, and with slight modifications in Murmi and Naga. The plural postfix is archaic Tatar and it occurs slightly varied in Bodo. The poss. is Seythic (Mongol, Manchu) and Burman.

The Takpa 1st pron. is a rare form in its vowel but with Bhotian and Ultraindo-Gangetic affinities. The 2d is current Chinese in its vowel like Horpa. The 3d is also current Chinese. The possessive particle is current Chinese, and the same form is found in Ultraindo-Gangetic dialects. Takpa has thus distinct and direct Chinese affinities, and the existence of current Chinese vocables and particles in a dialect placed like it explains their occurrence in Burma-Gangetic vocabularies in those instances where they cannot be referred to Bhotian nor to the direct modern action of Chinese on the Ultraindian languages. The non-Bhotian Chinese affinities of the Si-fan vocabularies are less striking and instructive with reference to the southern dissemination of Chinese forms, because they are actually conforminous with Chinese. It must be inferred that Takpa occupied the eastern portion of the Tsang-po basin, prior to the spread of the Bhotians in that direction, and that it was deeply acted on by Chinese. The forms do not appear to be entirely referable to the primary connection between Chinese and Tibetan, nor even to the

earlier periods of the mutual influence of the two families after their separation, and occupation of distinct provinces.

The Tibetan system of pronouns and other definitives is Chino-Seythic, and in its basis very archaic and, as a whole, not referable exclusively to any of the existing Chinese or Seythic languages as its parent. The roots are in general Chinese and Chino-Seythic and such as probably all existed in ancient Chinese dialects. Their forms are of an intermediate kind, the root sometimes appearing bare where in Seythic it would have a postfixed definitive, but in general the system presents compounds similar to those of the cruder and less agglutinative Seythic languages. While some of the forms of the particles are similar to the most prevalent Chinese and Seythic, others are more archaic, resembling remote Ugrian and N. E. Asian varieties. The pronominal roots are current Chinese, with the exception of the Bhotian 2d pronoun which is a broad form, similar to the 3d and to the broad forms of the allied Seythic 2d and 3d. The Sokpa *chha* has not the current slender and sibilant Mongolian, Tatar or Ugrian form, but one more akin to the Yakuti and Samoiede, and closely connected through the corresponding forms of the 3d pronoun with the Chinese broad form of the 3d pronoun *tha*. It is probable that similar archaic Chinese forms were also common in the archaic Seythic dialects and that they have been retained in some of the Tibetan ones. If Sokpa be an intrusive Mongolian dialect in a comparatively recent age it may have acquired rather than bestowed its broad 2d and 3d pronouns when it came in contact with the Tibetan languages. The 3d has the Gyami and Thochu broad form of the Chinese dental root, *tha*, the current Mongolian roots in other dialects being *ede*, *ene*. (Comp. the Quang-tung deng "that", Bhot. *de*, *re*). But one of them has *egun* and the Bhoto-Himalayan *kho*, *khunə* &c is the same form. If the Bhoto-Himalayan vocabularies had been much influenced by the Sokpa or other Mongolian it might have been inferred that these pronominal affinities were the result of the advance of the Mongolians into the Tibetan province. But as the general glossaries of the Bhoto-Himalayan tongues have few distinctively Mongolian affinities it may be concluded that the pronouns and definitives are archaic in Bhoto-Himalayan as in Seythic. The Bhotian system

helps to connect the Chino-Tibetan with the Scythic. The Chino-Tibetan is non-Scythic in its 1st and 2d pronouns but Scythic in its 3d. Scythic again may be considered as Chinese in its 2d as well as 3d, for the 2d is radically the same definitive as the 3d. In Bhotian the 1st pron. is current Chinese, while the 2d and 3d are Chinese and Scythic. It cannot be concluded that the more prevalent of the existing forms are the most modern. With the exception of those referable to the later emasculated phonology, all the current varieties and others also may have characterised different dialects and even become blended in the same dialect, in very remote periods.

Although the Chinese system differs from the Scythic in the common root of the 1st pron. it has also a labial root *wu, wo, fu* *Kwan-hwa, wa, uo, u* *Tie-chu*, which is connected with the Scythic through the N. E. Asian and American systems. Comp. *wu, wan, wang, uonga* *Namollo* and *Eskimo*; *unguar, o-ang-kiah, be, veeu, mii, vich, mii* *Sioux*; *my, mu, bu* *Kamschatkan* (the roots); *Yukahiri ma-tak*; *Japan wa-taksf* or *wa-takusi, wa-re, wa-ga*; *Ost. ma-zyot*; *Samoiède ma-t, bua-n, mo-di*; *Ugrian ma-tyot, mo-n*; *Sokpa abu*; and the slender Scythic and Indo-European *mi, min, bi, ben, men* &c. Indo-European in its retention both of the guttural and labial definitives in the 1st pron. adheres with Chinese to the primary habit more fully than the Scythic and N. E. Asian languages.

The Chinese 2d pronoun like the 1st is connected with Scythic through the liquid element of the N. E. Asian and N. American. *Samoiède pyd-yr, pud-ar* &c, *Esk. il-wit, (pl. el-pee-h-i)*, *Kodiak l-s-pyt, Namollo yei-pyk*, the more Scythic N. American, as the *Sioux ne, ni, de, di* &c; the *Kamschatkan roots tu, tche, se, s, r*. Comp. the *Japanese ana-ta sona-tu*; *Scythic ne (Ost.), se, si, sa, te, ti, ta, ton, d, g, chi* &c; *Indo-Europ. tu, thu, su, si, s* &c; *mu-li, urh, Chinese ne, ni, nei, nae, ngi, lu, du, ju, jo, nyu*. In all the systems the connection between the 2d and 3d pronoun is more clearly maintained. In Scythic and Indo-European it is less obscured than in the modern Chinese being indeed as distinct as in Bhotian.

In the various forms of the 3d pron. the relatives, interrogatives

&c Chinese preserves examples of nearly all the Tibeto-Ultra-Indian terms, and of the allied Dravirian, Scythic and Indo-European.

The result is that the Tibeto-Ultra-Indian roots present only some slight dialectic variations of the Chinese, and that as respect pronouns, definitives, and other particles the formation may be considered as a Chinese dialect, or rather as forming with Dravirian and Chinese dialects one mother tongue. Scythic, N. E. Asian and Indo-European in respect to this class of roots, are also similar but more divergent dialects. Bhotian from the absence of the postfixed definitives found in the pronouns of some of the other Tibeto-Ultra-Indian languages is less Scythic and more Chinese in form than these.

Sec. 4. NUMERALS.

The Tibetan, Himalayan and the allied-Ultra-Indian numerals are very remarkable in an ethnologic view. The earlier systems of numerals in S. E. Asia and its Islands were binary and ternary and these are still preserved in some portions of Asonesia. To these succeeded quinary and denary, radically based on binary and ternary systems. The two latest and most important are the Draviro-Ultra-Indian or Kol, still extant in a fragmentary state in various languages from the Vindyas to Tonkin, and the Malagaso-Polynesian. In the other Ultra-Indian and the connected Himalayan languages there are also traces of an ancient system of the same class, but the prevalent terms are of Chinese derivation. All this affords a striking illustration of the formations that have followed each other in this part of the world, and as improved systems of numerals and their wide extension are connected with the progress of particular nations is civilisation, it is reasonable to infer that the numerals of S. E. Asia and Asonesia indicate the advance into this region of a succession of races, each more civilised or at least more influential than the preceding ones.

Perhaps the most remarkable of all the curious phenomena of Asonesian and Indian ethnology is the absence of any evidence of the Chinese civilisation having, at an ancient period, exercised a powerful influence on the tribes of these two provinces. The reason must undoubtedly be sought in the fact of the Chinese nation having been originally a northern and inland one, entirely unconnected with the sea-board and insular tribes of the Indian

Ocean and the China Sea. What is now southern China was probably included in the Indo-Pacific ethnic province. If the Turanian race had been its earliest occupants we should not find negroes in the Andamans, Ultraindia, and the Philippines, and traces of them, linguistic or physical, in Formosa and Japan. But, putting the archaic negro element aside, it is evident that the non-Chinese Turanian tribes of Yun-nan, the Gangetic basin, Ultraindia and Asonesia must have been ancient occupants of Ultraindia and the southern portions of China, at the period when the Chinese race first advanced into their territories. The difference in physical characters and in civilisation would alone establish this, when taken in connection with the manifest antiquity of the Chinese as a distinct and strongly marked nation. But it rests on still stronger linguistic evidence. The known non-Chinese tongues of Southern China, the Anam and Lau, are in the great bulk of their vocabularies, entirely distinct languages from any of the Chinese, and the difference between the Chinese vocabularies themselves is so great as to render it certain that when the proper Chinese nation was confined to the basin of the Yellow River, numerous other languages were spoken by the independent tribes to the southward. All the Turanian tribes of Eastern Asia, including the rudest Ultraindian and Asonesian, the Kamschatkans and the Chukchi, as well as the Chinese, have many ethnic traits in common, but these belong to formations or civilisations that preceded the Chinese. The Ultraindian and Chinese tribes have also a still more archaic and fundamental connection in their phonologies, ideologies and roots. But this connection reaches back to ages anterior not only to the pre-Chinese civilisations of Eastern Asia, but to the development of all the other linguistic formations that have been spread over the world, including the Indo-Pacific and the Semítico-African. From this fact and the peculiar physical geography of China, which has been instrumental in producing it, we may safely infer that the Anam and Lau are only two of hundreds of distinct languages that were spoken by rude Turanian tribes between the Yellow River and the Ton-king, before the Chinese civilisation arose and began to spread itself beyond its original narrow district of Chin. And this brings us to the numerals. When China was only one of the small inland king-

doms of the Yellow River it was much nearer to the North Eastern and Eastern tribes of Tibet than to those of Ultraindia. I have, in another place, suggested that a special connection in race exists between the Bhotians and the Chinese. The Tibetan civilisation, at all events, is of Chinese origin, and amongst the Chinese acquisitions are included the numerals. The early and wide spread of these numerals over Tibet is proved by their presence in the Ultraindian and Gangetic languages in forms allied to the Bhotian but distinct from them, and obviously very ancient. Some are also closer to the Chinese. The Bhotian term for 7, is not Chinese at all, but Mongolian, Tungusian &c and it has not found its way across the Himalayas. I infer from these facts that the Chinese numerals were bestowed, at a very remote period, on all the tribes of Tibet, and that the Tibeto-Ultraindian and Himalayan forms in general were directly received not from the West Tibetan nation that eventually became predominant, but from the eastern tribes, an inference that is in strict accordance with the other facts from which the East Tibetan relationship of the Gangetico-Ultraindian tribes and languages has been deduced. The numerals of the North Ultraindian languages thus tend to prove that the influence of the Chinese civilisation first reached Ultraindia from Eastern Tibet, using that term in an ethnic sense, so as to embrace those tribes allied in race and language to the Si-fan who are scattered over the western borders of China. At a much later period the Lau appear to have received Chinese numerals and spread them over Ultraindia as far as their range extends. Some of their terms are peculiar, the remnants probably of a native or pre-Chinese system. The Chinese terms in Lau are directly derived from Chinese, and not from an intermediate Tibetan or Tibeto-Ultraindian source.

The question whether the Chinese numerals were current in Ultraindia and the Gangetic basin before the Arian era appears to resolve itself into the more general one respecting the period when the eastern Tibetans crossed the Himalayas into Ultraindia, for there is no reason to think that the numerals were not imported with the other glossarial possessions of the race. The mode in which they are partially blended with nearly all the Mon-Anam systems in the most remote and sequestered parts of Ultraindia

and its islands, appears to prove that they were slowly disseminated along with the other Tibeto-Burman words of which a sprinkling is found in the purer Mon-Anam vocabularies. In the Himalayas the fragments of the older numeral systems have the same character as the Tibeto-Ultraindian. They are Tibeto-Chinese in some of the peculiar Ultraindian forms, with traces of the more ancient Mon-Anam terms. The inference from all the data is that the Burmah-Himalayan tribes carried the Tibeto-Ultraindian numerals with them in their progress up the Gangetic basin and into that of the Indus, and that the Chinese terms were consequently used in northern India before the Arians introduced theirs.

The principal remnants of a pre-Chinese or non-Chinese system in the Burmah-Himalayan numerals are those contained in the terms for 7 and 8. Some of the other terms are also not Chinese, either in a Chinese or Tibetan form.

The Chino-Tibetan terms are, in a large number of the cis-Himalayan languages, curiously blended with older ones. In some cases the ancient binary and quinary principles have been retained, while the trans-Himalayan terms have been partially adopted. In others both systems and both sets of terms are intermixed. There are even languages in which the Dravirian, Mon-Anam and Tibeto-Ultraindian formations have each assisted with numeral roots or modes of combining them. Lastly the Sanskrit and the modern derivative systems of India have here and there contributed a numeral.

Several of the Ultraindian and Himalayan systems take postfixes, e. g. *chi*, *shi* or *sh* Limb.; *zho*, Chepang; *ya*, Kiranti (Vindyan *-ia*); *long*, Dhimal; *he*, Abor Miri; *ka*, Kuki; *ka* or *har*, Bongju; *bo*, *ple* Karen (2 *dialects*). The N. Ultraindian have also prefixes as with other words,—*ta*, *tha*, *pha*, *pe*, *pi*, *va*, *ba*, *pa*; *a*; *i* Naga & *a*-Dophla; *ga*, *gi*, Garo, *ka* Mikir (2), Lepcha *ka*, *hka* (7, 8, 9, 10, &c). Khyeng has *pa-* as in Naga. It appears also in the Kuki and Bongju 2, with the postf., *pa-ni-ka*; *pe-na-har*, and in some of the Himalayan terms, e. g. 4, Lepcha *pha-li*, Mag. *buli*, Murm. *bli*, Gur. *pli*, contracted in New. to *pi*; 5, Lepch. *pha-gnom*, Mag. *bang*, affording an unequivocal proof of the western influence of the N. Ultraindian formation. In

Singpho it takes the form *ma*, (3 *masum*, 4 *meli*, 5 *manga*, 8 *makat*). The prefix in the terms for 4 may be exceptional.

In written Tibetan the terms for 1; 2, 3, 4, 7, 9 and 10 have the prefixed consonants *g*, *b*, or *d* and in some cases it will be found that these have been preserved in cis-Himalayan vocabularies.

The publication of Mr Hodgson's Si-fan vocabularies since the preceding remarks were written now enables me to trace the exceptional Tibeto-Ultraiudian numerals to their sources in Eastern Tibet.

The Tibeto-Ultraiudian numerals are fully discussed in Appendix C, and I shall here confine myself to some remarks on the connection of the Tibeto-Chinese with the other Asiatic systems and on the distribution of the different varieties in the Gangetico-Ultraiudian province. I begin with the Tibeto-Chinese.

All the Tibetan numerals are Chinese with the exception of 7 and 8, which are quinary and denary. The Bhotian 7, as above remarked, is a foreign engraftment and probably not ancient, as it has made less progress even amongst the Himalayan dialects than other Bhotian vocables and Bhotian varieties of Tibetan vocables.

The formation of 7 from 2 (5, 2) and of 8 from 2 (4 dual, or 10—2, generally the latter) is a common archaic Aso-African idiom,—N. E. Asian, Scythic, Zimbrian &c. Hence the prevalent Tibetan terms are normal, and the Chinese exceptional, if the latter be really substantive words. A comparison of the different numeral elements with those of other Mid and North Asiatic systems will throw some light on this.

1. CHINESE, *chit*, *yit*, *it*, *i'*, *ih*, *chek*, *cha'*, *ja'*; (Gyami i).

TIBETAN, *gchik*, *chik* Bhot., *kati* Gyarung, *tabi* Manyak, (*che* and *chi* in 10) *ra* Horpa, *ari* Thochu. The Hok-kien *chit*, T'ie-chieu *chek*, (Quang-tung *yit*) preserve the ancient Chinese form, of which the Kwan-hwa *i'* is a contraction. The Tibetan and Bhotian forms have not been derived from the Kwan-hwa but from the archaic *chit*. The common dental and sibilant def. which passes into the palatal, guttural &c; and the full Tibeto-Chinese form is double as in the unit of Yeniseian, *chus*, *khus*, *huch*, *hautu*, and Kamschatkan, *dis*, *tash* (also *ta*). The Ugrian *ik*, *it*, *yksi* has the *k*, *i*, final element, and the slender vowel also connects it with the

Chino-Tibetan. In some of the higher Scythic numerals the unit is preserved in broad archaic forms similar to the N. E. Asian, *chut*, *kut*, *kaus* &c while others have the slender Chinese and Ugrian forms. Thus in 2 Ugrian has *kyk*, *kit* &c, Samoiède *sit*, *side* &c, Turkish *iki* (for *sik* as in 7). The Chinese unit may be compared with the 3rd pron. and demonstratives *ki* or *i*, *ti*, *tsz*, *che*, *chi*, *chit*, and with the segregative *chik*. The broad form of Manyak *ta* is probably an archaic Chinese form, a varying to *i* in the pronominal system of Chinese, Tibetan and Ultraiudian. The Hailam *ja'* is a current Chinese form in *a*. The Horpa *ra* is an example of that common change of *t*, *s* to *r* in the Scythic and Tibeto-Ultraiudian phonologies on which I have before remarked. A similar variation takes place in some of the forms of 4. The Thochu *a* is a contraction of the Manyak-Horpa form. In 2 and 3 the Thochu forms also correspond with the Manyak and not with the intermediate Gyarung, which with the Bhotian forms have a closer resemblance to the current Chinese in its oldest forms. The Thochu and Manyak are probably representatives of more archaic Chinese forms, the dialects which possessed them in China being now obsolete.

2. CHIN. *urb*, *ir*, *il*, *li*, *liang*, *ni'*, *ji*, *gi*, *no*; (Gyami *liang*, *ar*),

TIB. *guyis*, *nyi* Bhot., *hanes* Gyar., *nge* Hor., *ngari* Thoch., *nabi* Many. There is little difference between the Kwan-hwa and the other Chinese forms. The Bhotian *nyi* resembles the Shanghai *ni*. The liquid definitive is current in Chinese as a demonstrative *na* "that", and is found in most Aso-African formations. It is a very common element in the numeral 2, but it appears to be archaically a mere variety of *t*, *s* in the N. and Mid-Asiatic definitive and numeral systems. In the Samoiède *si-ri*, *si-ti*, *si-t*, Mongolian *ko-ir*, *cho-yur*, Tungusian *ju-r*, *dzu-r*, Caucasian *zu-r*, *shi-ri*, *o-ri*, *ie-ru* the final *t*, *s*, becomes *r* as in the Turkish *bir* for *bis*. But the Chinese *li* is probably radically identical with the first element *si* and not with the second. The def. appears in the same *r* form in Dravirian, the archaic connection of the pronouns of which with the Chino-Tibetan has been elsewhere indicated. Dravirian *ira-ndu*, *era-d*, *ira-t* &c, 2. It is also singly or in combination the prevalent Semitico-African root for 2, and a common Aso-African dual and plural particle. The Chinese

forms appear to be connected with the Seythie. From the interchange of *k*, *ch*, *j*, *t*, and *s*, and of *s*, *r*, *l*, *n*, in the Seythie numeral and definitive systems it is not probable that there is any radical distinction between the forms above given and the Ugrian and Turkish *kyk*, *kok*, *kit*, *iki* &c. The existence of the *r* form in the S. E. branches of Tatar (Mongolian, Tungusian) and in the adjacent Chinese, indicates an archaic prevalence of the Samoiède variety in this region and the Chinese may possibly be a contraction of *sil*, *sir*. The Tibeto-UltraIndian *nyi*, *ni* &c is evidently from the Chinese *li*, *ni*, and not a direct derivative of any of the Seythie forms. The final *s* of Bhotian and Gyarung may have been archaic Chinese, but it is more probably a Tibetan augment. The Thochu and Manyak *nga*, *na* are probably archaic Chinese forms, Chinese having *na* as a demonstrative and *no* as one of the varieties of the numeral.

3. CHIN. *san*, *sang*, *sam*, *sa*, *ta*, (Gyami *san*, *sang*).

TIB. *kasam* Gyar., *gsum*, *sum* Bhot., *su* Hor. ; *kshiri* Thochu, *sibi* Many. The root appears to be the sibilant *def.*, and as in the binary basis of other systems the same as that used for 1. The broad vowel now distinguishes the form from that used for 1. In the Chinese pronominal system the same definitive occurs as a third pron. in the forms *tha*, *ta* "he &c," as a relative in the form *so* and as an interrogative in the form *shu*, *shui*. Similar forms with variations of the vowel (*thi*, *ti*, *si* &c) are current in the Tibeto-UltraIndian pronominal systems. Although the vowel is *a* in all the Chinese varieties it does not follow that the Tibetan *su* and *si*, *shi* are merely local variations of an original *sa*, for similar forms may have been current in the archaic Chinese numeral as in the pronominal system. The Manyak and Thochu *si*, *shi* are probably obsolete Chinese forms. From the occurrence of *-m* in one of the least emasculated of the Chinese dialects (Kwang-tung) and in Gyarung and Bhotian it was probably the original form of the final. If the vocable be native, *m* must be considered radical, as in other Chinese monosyllabic roots having final *-m* in the ancient phonology. But the analogies between the Chinese numerals and the archaic N. and Mid. Asian and the irregular character of the Chinese system suggest the enquiry whether *sam* may not be a derivative from a

foreign system in which *sa* was the root and *m* a postfix. If it be a distinct definitive it is probably the labial possessive and qualitative postfix, still preserved in some Scythic languages, as in Bhotian and which was the distinctive postfix of one of the most archaic Mid and North Asian numeral systems. Remnants of the numerals of this system are found in several branches of Scythic and in the allied Caucasian systems. One of the Yeniseian dialects (Imbask) retains it throughout in the forms *-em*, *-am*, *-m*, *-be*. In the Scythic remnants it has generally a slender form (as in the Imbaski *-em*, *-be*), *-me*, *-im*. The pure sibilant, dental &c, occur as 3 in Korean *sai* (in 30 *shi* as in Thochu) Kamschatkan *tzo*, *cho*, Yeniseian *to*, *tong*. The Scythic terms have generally the double form of the unit as in the Scythic, Chinese and Tibetan 1; e. g. *chudem*, *kujim*, *korom*. In 7 the unit root occurs in the forms *sisem*, *sim*. In Koriak which has a nasal prefix and a guttural postfix the sibilant undergoes the common change to *r* and *y*,—*ng-sho-han*, *nga-so-g*, *ne-ro-ha*, *ni-yo-ch*, *gi-u-ch*. Aino has also *r* but with the archaic labial postfix *ra-ph*, *re-ph*, *re-zb*. Caucasian preserves a form still closer to the Chinese than the double ones of Ugrian. It has *sami*, *semi*, *sumi*. The postfix has here also the Scythic slender form, and one of the Tibetan dialects Manyak, which preserves the labial postfix throughout like Imbaski, has the same vowel, *-bi*. This is the more remarkable from Bhotian having the form *-po*, *-bo*, as its qualitative postfix. Chinese again has *hu*, *di*, *ti* &c postposed. Manyak itself has *i*, *e* poss. as in Burman and Bhotian (from *ki*, *kyi* &c) and *de*, *da*- &c qualitative. It seems clear therefore that the numeral postfix *-bi* belongs to an archaic Scythic connection. Samoiède has a form similar to the Chinese in 5, *sam*, *sum*, *sobo*, *saba* &c.

4. CHIN. *si*, *se*, *sz*, *ti* (Gyami *si*); TRIB. *bzhi*, *zhyi*, *zhi*, in 40 *hi*, in 8 *br* Bhot.; *hadi*, in 40 *pli*, in 8 *or*, Gyar.; *gzhare*, in 40 *ghyi*, in 8 *hkrare*, Thochu; *rebi*, in 40 *zyi*, in 8 *zi*, Manyak; *hla*, in 40 *le*, in 8 *rhi-éc*, Horpa; the variations are thus *si*, *zi*, *zyi*, *zhi*, *zhyi*; *se*; *sz*; *hi*, *hyi*; *ti*, *di*; *rhi*, *li*, *le*, *re*; *zha*, *ra*, *hla*, *or*, *r*. This is the same sibilant definitive, (variable to the dental, liquid and aspirate) that is found in lower numbers. In the basis of most homogenous systems 4 is merely a variation of 2 or of the original full compound 2, 2. If *si* be 2 dual, as is proba-

ble, it is referable to an obsolete sibilant form of *li*, *ri*, 2, or to a fuller form of 2 similar to the Samoiede &c, *sil* &c. The Tibetan liquid *li* &c occurring in all the dialects, preserves the form now obsolete in the Chinese 4 although preserved in 2, one of many illustrations of the great antiquity of the first diffusion of the Chino-Tibetan numerals. Yeniseian has the same 4, *siem*, *siam*, *ziang*, *shega*, *shaga*. Tungusian has it in the dental form *digin*, *degen*, *dugun*. Koriak has *s* and *r* forms, *n-sha-haw*, *ng-ra-ha* &c. Samoiede has the double dental form *teti* &c which is but a variation of its *siti*, *side*, *siri* &c 2. Mongolian and Turkish have the same double def. in broader forms *dur*, *der*, *dor*, *tir*, *dor-t* *tir-t* &c.

The Thochu broad forms, *zha*, *ra*, may be from the current Chinese like the Bhotian, and probably also the Gyarung. But the initial def. distinct from the Bhotian *b- g-* and the forms of some of the other Thochu numerals are in favour of its being older. The Horpa *hla* is a similar broad form.

5. CHIN. *ngu*, *ngo*, *go*, *wu*, *u*, *ng* (Gyami *wu*); TIB. *lung-ngo* Gyar., *nha*, *nga* Bhot. *nga* Many.; *gwe* Hor., *ware* Thochu. The Gyarung preserves the Chinese vowel. Bhotian, Manyak and Horpa have *a*. In like manner where Bhotian has the Chinese *o* of the 1st pronoun, Gyarung, Horpa and Manyak have *a*. The Horpa and Thochu forms are probably local varieties but they may have an independent connection with Chinese through western varieties similar to the *wu*, *u*, of Kwan-hwa and *go* of Hok-kien. The Thochu *wa* may be merely a variation of *gwe* or of *wu*. It is possible that in it and even in *wu* we have a remnant of an archaic labial 5 (Sec. 8). In the earlier numeral systems 5 was generally 1. In those binary systems which went beyond 4, it was 4, 1, that is 2, 2, 1. In the quinary or hand system 5 was 1 hand or full tale. The Chinese *ngu* is a distinct form from the def. used as 1 and from the varieties occurring in 2, 3 and 4 with the exception of *no*, 2. It probably belonged primarily to a system which used a similar form as 1, as is still the case in Koriak. Yukabiri has the nasal def. in 5.

6. CHIN. *lyeu*, *lah*, *lo'*, *luk*, *loh*, *la'* (Gyami *leu*); TIB., *druk*, *duk*, *tuk*, *thu*, Bhot., *kutok* Gyar.; *trubi* Many., *khu-tare* Thochu; *chho* Hor.

The full form of the Chinese is preserved in the Kwang-tung *luk*.

The Bhotian and Gyarung forms are evidently from a similar form. The Manyak *tru* is from the Bhotian *druk*. The Thochu *ta* and Horpa *chho* are probably variations of similar vocalic forms, *to*, &c.

This numeral like 5 preserves no distinct affinity with the lower numbers. In purely quinary systems 6 is a variety of the unit as 5 itself is. But in some of the Scythic systems the scale is ternary, 6 being 3 (for 3, 3), and 7 being 1 (for 6, 1). As the only term similar to the Chinese in the connected systems is the Kamschatkan *roch*, *roka* of *ng-ro-ch*, *ng-ro-ha*, 3, it was probably derived from a cognate N. E. Asian system. The Chinese *luk* is identical with this term, while it cannot be referred to the current terms for 3 or 1, nor to any def. current in the pronominal system.

7. CHIN. *ts'hib*, *chhi*, *ch'hit*, *tsat*, *thet*, *ch'het*, *t'sih*, *sit* (Gyami *chhi*) TIN. ? *skwibi* Manyak, *stare* Thochu.

With this numeral the current Chinese system departs entirely from the proper Tibetan. The latter has a quinary term for 7, that is 7 is the numeral 2 (from 5, 2). The Chinese 7 is not a variety of 2 but of 1 (comp. the full forms *chit* 1, *ch'hit*, *sit* 7). It adheres therefore to the ternary scale and this confirms the conclusion that 6 was 3, 3. Japanese, Yukahiri and in N. America Athapas, can have a similar ternary 7, and in some of the Scythic systems the same double definitive is used as the unit in 7—Ugrian *seitse-man*, *sis-im*, *si-m*, *sata* &c. Turkish *sit*, *seti*, *siche*, *chedy* &c.

TIBETAN. *ku-sh-nes* Gyar. (*nes* 2), *z-ne* Horpa.. This term is quinary, 2 for 5, 2. The etymology of the prefixed *sh* and *z* must remain for the present uncertain.

In the other Tibetan terms there is much irregularity. I have placed the Manyak and the Thochu with the Chinese, but the connection is doubtful, especially in the case of Manyak. In both the initial sibilant (*s-ta-re s-kwi-bi*), may have the same origin as that of Gyarung and Horpa, *sh-*, *z-*. This would confirm the Chinese affinity of the Thochu root, for *ta* is an archaic Tibetan form of the Chinese 1 (*tabi* Manyak). The guttural in the Manyak *s-kwi* may be from the initial guttural in some Tibeto-Ultraindian forms of 2 (*gnyis* Bhot., *khi* Karen).

The Bhotian 7, *bdun*, *dun*, appears to be a Mongolian engraft-

ment (Sokpa tolo, Mong. *dolon*, &c). It is probable that it is later than the other Tibetan terms, and displaced a quinary one, for it is only found to the south in the Bhotian dialects of Lhopa, Serpa and Changlo, while the other Himalayan systems connected with the Bhotian have quinary terms similar to the Gyarung.

8. CHIN.—*pat*, *pab*, *pe*, *boi*, *poi* (Gyami *pa*). This root has no connection with any of the lower numerals. It cannot therefore be explained as a native binary (4, 4) or quinary (5, 3) term. Besides quinary terms, several of the Mid and North Asiatic system have terms formed subtractively from 10. In these the root for 2 is frequently alone preserved. *Pat* however has no connection with the Chinese 2. A similar root is 100, *pe'*, *be'*, *pa'* and the Bhotian 100 appears to be also related to the root for 8. Such a connection would most naturally happen through a labial root for 10, since 100 is very generally expressed like 10 by the unit. In the other systems of Mid and North Asia the labial is a definitive and unit, and it appears at some archaic period to have been a very important root in expressing higher numbers also, as it still is in some of the older systems of the S.E. provinces of the Old World,—Kol, Australian, African. In the Seythie and N. E. Asian system as in Chinese the *t*, *s*, *r*, *k*, &c. def. is now the chief numeral root, but most of them preserve remnants of labial numerals. Chinese has the labial as a def. (3rd pron. and demons.) under the form *pi*. In the Seythie and N.E. Asian systems it has still a considerable currency as 1, 5, 10 and 1000. For 1, Ugrian has *vaiké*, *va* &c, Tungusian *emu* &c, Turkish *bir*, [=bis, bit] *per*, Japan *fito*; for 5, Ugrian has *vate*, *vis* &c, Turkish *bish*, *bes* &c, Iroquois *wish*, *wis* &c; for 10, Samoiède has *bet*, *bi*, *wi*, *bu*, *bun*, Tungusian *men*; Turkish *wona*. In the Ugrian languages it has been superseded by the dental &c as 10, but it is preserved as an archaic 10 in 8 (2, 10) and 9 (1, 10) in the form *mis*. Aino has *wam-bi* &c 10. From the occurrence of the labial in the Chinese 100 and 10,000 (*wan*, *ban*), its presence in 8 is best explained as an archaic and obsolete unit applied to 10, and 100. The full term was probably similar to the Ugrian 8, *kika-mis* (2, 10), the Dravirian 9 *om-bad* (1, 10), and the analogous N. E. Asian and African terms. The Dravirian *patta*, *bad* &c 10, *vodda* 1 preserves a broad form of the labial unit similar to the Chinese

pat 8, and the Ugrian vate 5, vaike 1. The common Scythic form is the slender vit, vis, mis, bis, bir &c. [See the remarks on the labial definitive and numeral in the Dravido-Australian, Semitic-African and Scythic systems]

In some of the Tibeto-Ultraindian dialects a labial 10 and 5 are preserved. Undoubted instances of it are the 10 of Kasia shi-pon (shi 1, Chinese), Limbu thi-bong, Murmi chi-wai, Naga pan, ban, the Chinese form. In the higher numbers of Kasia and Limbu it is 10 (App. A p. 6), and Kumi also has it in the higher numbers apong. The Limbu and Kiranti 9 phangsh, phangya are probably remnants of 1, 10, as the Chinese 8 is of 2, 10 the numerals for 1 and 2 having been dropped. The labial occurs in 5 in several languages but in some at least it appears to be prefixal as in 4. In the Chepang pu-ma-zho, Shindu me pa the root is clearly ma, pa and it favours the opinion that the Thochu wa is also an archaic labial root. The Bodo pa may perhaps be placed with them, and not with the doubtful bonga Garo, phong Mikir, manga Singpho, banga, pungu, phanga &c Naga, pan Kumi, banga Magar, in some of which at least the root is the Chino-Tibetan nga (comp. Naga pha-li 4, pha-nga 5). The Murmi chi-wai 10 (i. e. 1, 10) is a compound similar to the Kasia and Limbu 10, but the labial has the form found in the Kambojan ma-pai 20 (i. e. 2, 10), Kumi wai-re 100, Sunwar s-wai-ka 100. The form resembles the Kasia variety of the Kol-Ultraindian 1, wei. The 5 of that system being mon, mona, mun, mo in Kol although not in the allied Ultraindian systems, it must be considered doubtful whether the Ultraindo-Gangetic labial 10, 5 &c, are referable to that system or to archaic Chino-Tibetan or Chino-Ultraindian labial numerals. Ultimately the Dravirian, the Scythic and the Chinese labial numerals are connected through an archaic Mid or N. S. Asian system.

TIB. *br-gyud*, *gye* Bhot., *or-yet* Gyar., *rh-icé* Hor., *hhrare* Thochu; *zibi* Manyak. In the Appendix the presence of 2 in most of the Tibeto-Ultraindian terms for 8 is indicated and they are considered as binary. The Bhotian term is left unexplained. From the Gyarung *or-yet*, Takpa *gyet*, it appears that the root is yet, corresponding with ye of the Bhotian *gye*. In *br-gyud* the root must also be yud. This analysis is confirmed by the Himala-

yan and Ultraindo-Gangetic forms *g-ya*, *g-ye*, *yet-sh* (Limbu), *yoh*, *sh-yit* (Burm.) *ri-yat* Mru. &c. In all these forms the constant root is evidently *yet* &c, and *yet* itself is a variation of 2 (comp. in Limbu *nyet* 2, *yet* 8, Burman *nhit* 2, *sh-yit* 8; Horpa *nge* 2, *rhié* 8; Thochu *nga-ri* 2, *hh-ra-e* 8). In the Abor-Miri *pu-nit-ko*, *pi-nye* the 2 retains its full nasal form *nit*, *nye*. In Appendices A and C, I have considered this as 4 dual or 2d 4. From the analogy of the Chinese, Scythic and Dravirian terms it might be inferred that in all the Tibeto-Ultraindian words for 8 in which 2 is the root or an element, the primary form was 2, 10. Prof. Müller has pointed out that the Mikir *nir-kep*, 8, and *chir-kep*, 9, are formed from *hini*, 2, *ichi* 1, and *kep* 10. But the initial elements *br*, *rh*, *or*, *re*, *ri* in some of the preceding forms and the *pre*, *pra*, *pla*, *pi*, *pu* &c of other Ultraindo-Gangetic languages are evidently the *re* Manyak, *hla* Horpa, *pli* Takpa (*bzhi* Bhot., *di* Gyar.) of 4.* Similar forms are common in the Ultraindo-Gangetic vocabularies (App. *Four*). The Bhotian *br-gyud*, Gyar. *or-yet* and all the cognate terms are thus 4, 2, (i. e. 4 the 2nd time).

The Manyak *zibi* appears to preserve the root for 4 only, in its primary Bhotian and Chinese form *zhi*, *si*. But for the analogy of the other languages and the occurrence of *zyi* in 40, it might be explained as a native quinary term (5, 3), 3 being *sibi* while 2 is *nabi*.

The formation of 8 from 4 is found in Yakuhiri, Japanese and

* If the Bhotian *br* stood alone it would be considered as a mere def. prefix, similar double prefixes being used with some other words. It is noticeable that it is not the current Bhotian *bzhi*; but that the numeral was at one time current in Tibet as *bri*, *bre* &c is evident from the Takpa and Gurung *pli*, Bodo, *bre*, Garo *bri*, Murut *bli*, (in 8 *pre*) Magar *buli*, Newar *pi*, Lepcha *phali*, Chepang *phoi-cha*, Kiranti *la-ya* (*re-ya* in 8), Mikir *phili*, Dophla *a-pi*, Singpho *mali*, Naga *beli*, *pili*, *phuli*, Kumi *mali*, Kumi *palu*, Shindu *puli*, Sak *pri*, and the radical *hla* Horpa, *re* Manyak, *le* Sunwar, *lish* Limbu, *lika* Kuki, *lii* Khyeng, *lii* Tunglu, *pi* Newar, *phi* Changlo, *a-pi-ko* Miri. It is probable from this wide prevalence of the form in Si-tan-Ultraindian vocabularies that it was current for 4 and entered into the compound for 8 in the system of one of the more dominant and dispersive Si-tan tribes. It may have been communicated by it to Bhotian, but it is quite possible that both *bzhi* and *bri* forms were current as 4 in Bhotian dialects. The form *gyud*, *gyet* for 2 appears to be also a Bhotian dialectic variation. Bhotian is very prone to liquid augment, and in the current 2 *gnyis* w. *nyi* o. the Chinese *n* of *ni* becomes *ny*. In the Manyak and Gyarung forms *na*, *nes*, the augment is absent. *Gyet* is evidently from a dialectic variation of *gnyis*, contracted by the suppression of the nasal and the conversion of the final sibilant into a dental. The Lepcha full form *nyet*, probably an immediate derivative from the Bhotian dialect in question, and the Takpa *gyet* 8, and Gyarung *or-yet* 8, are also referable to it and not to the native forms of 2 (*nai* Takpa, *kaues* Gyar.) The spoken Bhotian *gye* preserves the same form contracted. The written *gyud* is a secondary dialectic variation, the original vowel being *i* *gnyis*, *nyi* as in Chinese.

some of the Ugrian and Samoiede systems (e. g. Sam. sin-det, from side, 2, and tet, 4).

9. CHIN. kyeu, kieu, kiu, kau (Gyam. chyü); TIB. *dgu*, gub, gu Bhot.; *kung-gu* Gyar., gubi Many., gø Hor., *rgure* Thochu.

The root is probably the unit in the guttural form found in the Mid and N. Asian systems as a variation of *ch*, *t*, *s* &c. It occurs in these systems in 9 by itself or with a root for 10 (i. e. 1,10; or 1 with 10 elided). Ugrian has *ok-mys* (1,10), *aktse* (*akt* 1), &c, Japan *ko-kono*, Koriak, Yukahiri, *chona*, *chonai*, (Kamsch. *koni* 1, Namollo *kule* 1). The first vowel of the Chinese is the same as that of *chit* 1, of the pronouns and demonstratives *ki*, *ti*, *chi* &c, and of the cognate Ugrian unit *ik*, *it* &c. But Chinese has also broad forms. The def. *ku* is used as a 3rd pron. in Kwan-hwa, and under the amplified form *khui* in Kwang-tung, in Shanghai it is "*that*", in Kwantung under the form *koi*, "*this*."

10. CHIN. *shi'*, *shih*, *ship*, *sip*, *chap*, *tap*, *chap*, *zeb*, (Gyami ish). TIB. *sih* Gyar., *che-chi-bi* Manyak (*che*, 1, a Chinese form, i. e. 1,10) *behu*, *chuh* Bhot.

The *shi*, *si*, *ta*, *cha*, *chi*, *che*, of this term is the def. used for 1. The labial final may be a mere phonetic augment, but some of the Ultraindo-Gangetic forms are suggestive of its being a remnant of the labial unit used as 10. Kasia *thi-pon*, Limbu *thi-bon*. The final labial has been lost in the Tibetan terms, but it is found in Mikir *kep*, Kiranti *kip*, and Chepang *gyib-zho*. If the labial be neither a mere augment nor a separate root in Chinese, it may be a remnant of the def. postf. like *m* in *sam* 3, and thus be indirectly connected with the Manyak *chi-bi*.

The Horpa *sga* (*ska* in higher numbers) appears to be a broad form of *cha*. The *s* appears to be prefixal as in *z-ne* 7, (Gyar. *sh-nes*) in 9 of Bodo *chku*, and Garo *shku*, and in the other Ultraindo-Gangetic higher numbers which have *ta-*, *cha-*, *tha-*, *sa-* &c. The Garo *s-kang* 10 has the Horpa form.

The Thochu *hadure* is probably a corresponding form *hadu* with the pref. aspirated as in the Kami *hasuh*, and the root with the Bhotian vowel (*chu*, in the Changlo 1, *thu*).

The prefixes and postfixes of the Tibetan systems,—Bhot. *g-* (1, 2, 3), *d-* (9), *b-* (4, 7, 8, 10); Gyarung *ka-*, *hu-*, *kung-*; *k-*, *kh-*, *hha-*, *ka-*, *r-*[=*d-* Bhot.]; Manyak *-bi*, Thochu *-re*, *-ri*,—are not of Chinese origin. They belong to the Scythic and proto-Scythic (Yeniseian, N. E. Asian, Caucasian) connection of the formation, and have been added to the Chinese roots. The Manyak and Thochu in the regular use of a qualitative postfix are Tibeto-Scythic. The Gyami *-ku* is the Chinese segregative. The segregatives vary with the class of the substantives enumerated and not with the numeral.

The Tibetan systems present some of those irregularities which evince the long prevalence and partial blending of different dialects, but with the exception of the Bhotian 7, all the numerals are referable to the Chinese system. Close representatives are current of most of the Chinese numerals, not in the modern diffusive forms of the Kwan-liwa found in Gyami, but in the forms in which they are still preserved in the least abraded Chinese dialects as the Kwangtung. It is probable, however, that some of the variations from these forms are not purely local, but are archaic Chino-Tibetan, and indicate the existence in China of more than one dialectic system of numerals when they were first spread westward into the Tibetan province. The Tibetan 7 and 8 must have been derived from a dialect distinct from the single one which now prevails throughout all the Chinese provinces. They are pure Chinese in roots, but the one is quinary 2 (for 5, 2), and the other binary 2, 4, whereas the current Chinese is ternary in 7 (1 for 6, 1), and apparently denary (10 for 1, 10) in 8. Both Chinese and Tibetan are denary in 9.

As all these methods are found in the other numeral systems of Eastern Asia, and as the union of all tribes of China into one nation is a historical event, it is probable that in archaic times several similar divergent systems existed in the Chino-Tibetan region. The first introduction of Chinese numerals into Tibet may be equally ancient with that of the pronouns and definitives, which also show some dialectic variations of an archaic Scythic kind. In other words, the tribes that gave a Chinese formation to Tibet may not have separated from the cognate Chinese tribes till some at least of the numerals were in use.

When we test the Chino-Tibetan numerals by their relationship amongst themselves and to the current definitives, they are found to be less regular and homogenous than many of the other systems of Asia, Africa and Asonesia. Many of the Scythic and N. E. Asian systems are less disorganised. But in these, irregularities of the same kind occur, and the Chino-Tibetan system, if considered as only the last remnant of several dialects that existed from a very remote era and borrowed from each other, will take its place with those Scythic ones which have been most changed by a similar cause. The liability of numerals to be displaced by the roots and forms of other dialects is fully illustrated in the sections on the Dravido-Australian, Semitico-African, Indo-European and N. E. Asian numerals, and even in the limited Tibetan field we have found some examples. Thus in Gyarung 2 has one Bhotian form, *nes*, in 2, and another, yet, in 8; while 4 has a native variation *di*, in 4, the Takpa form *pli* in 40, and a third variation, *or*, in 8. Manyak has one variation of the Chinese 4 in 4 *re*, but preserves the common Chino-Bhotian form in 8 *zi*, and 40, *zyi*; it has a peculiar form of the Chinese 1 in 1 *ta*, but possesses the Chino-Tibetan in 10, *chi*.

The archaic Chinese numeral systems were evidently closely related to the archaic Scythic or proto-Scythic. They were not mere derivatives of the Scythic nor the converse. They go back to the period when the Asiatic systems were little dispersed geographically, and some of the extant forms resemble those of the remoter Scythoid languages—as those of N. E. Asia,—and those found in formations of which the connection with Scythic is very archaic,—as the Caucasian and Dravirian.

The roots are all or nearly all current as definitives, and both the definitive and numeral systems of Chinese proper are remarkable for the secondary rank which the labial holds. But there are strong grounds for believing that in the primary eras of the Chinese glossaries, as in those of the more advanced formations, it held at least an equal place with the dental &c. The Australo-Kol, the African, the Dravirian, the Scythic and N. E. Asian, and the Chinese, illustrate various stages in the decadence of the labial. The monosyllabic dialects that have been transmitted in the basis

of the Indo-Australian and African glossaries probably separated from the Mid-Asiatic linguistic province before the dental began to predominate as a definitive and unit. It may be remarked that languages and formations that have lost the labial as a 3d pronoun preserve it as a demonstrative, and even when it is no longer current as a demonstrative, it sometimes lingers as an interrogative, relative &c.

The existing Chinese has doubtless suffered great changes during the period in which the various harmonic formations have been developed and dispersed, and these changes must have been chiefly glossarial. It is consistent with the history of all formations that primary or archaic vocables and forms should sometimes be found best preserved in those languages and families that were earliest removed from the primitive ethnic location. In the continued mutual linguistic influence of the East Asiatic tribes, Chinese and Scythic, changes have probably taken place in the glossaries of all the less secluded nations, from which the Dravirian, Asonesian, African and American remain free.

Sec. 5. THE MISCELLANEOUS GLOSSARIAL AFFINITIES OF THE TIBETAN DIALECTS AMONGST THEMSELVES AND WITH CHINESE AND SCYTHIC.

A glance at Mr Hodgson's tables shows that the Tibetan vocabularies are all intimately connected. Comparing the western or Bhotian with the eastern or Si-fan we find that in the list of 60 or rather 58 miscellaneous vocables,* Bhotian has about 24 in common with Thochu, 33 with Gyarung, and 26 with Manyak. The agreement is thus from 30 to 60 per cent. The adjacent Horpa has 36 of the 58 words Bhotian.

Of 59 Bhotian vocables only 7 are not found in any of the other Tibetan vocabularies (8, 24, 30, 41, 45, 46, 50). Of the remainder, 7 are found in all the other vocabularies (2, 7, 20, 26, 42, 48, 51); 3 in Horpa, Thochu and Gyarung (15, 27, 56); 1 in Horpa, Thochu and Manyak (3); 2 in Horpa and Thochu (1, 25); 7 in Horpa, Gyarung and Manyak (6, 14, 19, 29, 37, 38, 54); 6 in Horpa and Gyarung (12, 17, 21, 36, 40, 60); 5 in Horpa and Manyak, (22, 28, 32, 33, 52); 5 in Horpa (16, 23, 39, 44, 55); 2 in Thochu, Gyarung and Manyak (31, 47);

* For the words corresponding with the numbers see Vocabulary *ante*, p. 183. In some of the Tibetan lists two and even more words are deficient.

4 in Thochu and Gyarung (11, 13, 57, 59); 1 in Thochu and Manyak (34); 3 in Thochu (9, 43, 49); 1 in Gyarung and Manyak (4); 3 in Gyarung (18, 35, 53); and 2 in Manyak (5, 10).

The Chinese affinities with the Tibetan vocabularies collectively are considerable. About 31 of the Chinese vocables in the list are found in one or more of the Tibetan vocabularies (3, 4, 5, 6, 10, 12, 13, 15, 16, 17, 18, 20, 21, 22, 23, 25, 26, 33, 35, 39, 40, 44, 47, 52, 55). With single vocabularies the agreement is much smaller. Bhotian has about 14 Chinese words, Horpa 10, Thochu 8, Gyarung 12 and Manyak 6. The extent to which the same Chinese vocable has been diffused or preserved in several of the Tibetan dialects may be seen from the subjoined statement which, like those that follow it, is not to be considered as minutely accurate, the object and the value of comparisons on so limited a scale not rendering rigid precision worth the labour of attaining it. Several of the Chinese words are obviously of modern importation, a consequence of the great political and social influence the Chinese have long enjoyed in Tibet and their constant intercourse with the Tibetans. The proportion of vocables archaically common to the two families cannot be ascertained, without larger and more exact comparisons, but many of the common words in the list are certainly archaic. Some are found as roots with variable forms and meanings in all the S. E. Asian vocabularies.

Of the 60 words Chinese has 1 in common with Bhotian, Horpa, Thochu, Gyarung and Manyak (20); 1 with B., G. and M. (47); 1 with B., H. and G. (17); 1 with B., H. and M. (4); 1 with B., T. and G. (13); 4 with B. and H. (23, 25, 39, 40); 2 with B. and G. (37, 59); 3 with B. (6, 33, 49); 1 with H., T. and M. (10); 1 with H., T. and G. (18); 1 with H. (5); 3 with T. and G. (15, 18, 55); 3 with T. (22, 35, 44); 5 with G. (5, 12, 16, 26, 52); and 2 with M. (21, 55);—being 25 vocables in all.

The Scythic ingredient is much larger and more important than the Chinese. Bhotian has at least 29 or 30 Scythic roots in 78, that is about 40 per cent (1, 5, 7, 10, 12, 14, 15, 19, 20, 21, 25,—two roots, three if one common to Chinese be included—26, 27,

29, 33, 35, 37, 38, 39—two roots,— 43, 46, 48, 50, 52, 53, 54, 56). Horpa in about 60 words has 20 of these Scythico-Bhotian vocabularies and 9 other Scythic roots (30, 34, 35, 43, 46, 50, 53, 57, 59) making about 50 per cent. Thochu is much more independent of Bhotian and Horpa in the range of its Scythic affinities than these are of each other. It has only about 9 of the Bhoto-Scythic roots, but it has 16 others, some of which occur in other Si-fan vocabularies or in Horpa, although most are peculiar. Gyarung has 6 non-Bhotian Scythic vocabularies (1, 23, 39, 43, 49, 52) and most of them are Turkish. The connection thus indicated must be modern compared with that in which the Tibetan affinities with Samoiede, Fin and other remote Scythic languages originated. The special influence of Turkish on the Gyarung is further shown by the Turkish forms found in those Ultraindian vocabularies that are most allied to Gyarung. The Turkish words have frequently slender vowels, e. g. *il wind*, Gyar., Burman &c *li, le air*; *tin, night*, G. *to-di*; *diri, tire, skin*, G. *ti-dri*. Manyak has 4 Turkish words, 3 Mongolian and about 9 more remote and non-Bhotian Scythic.

All the vocabularies have a few Turkish and Mongolian terms, the close accordance of which with forms current in these groups, indicates that they have been communicated to the Tibetan tribes by their Tartar neighbours during the latest era of Scythic history or that in which the Turks and Mongols have marched with the Tibetans and spread themselves into their province. The Turkish words are more numerous than the Mongolian and this is probably to be ascribed to the fact of Turkish predominance in the northern borders of Tibet having preceded the Mongolian and endured for a much longer period. The numerous Turkish forms in Ultraindian and Asonesian vocabularies corroborate this inference. There are a few Tungusian terms but it is doubtful if they are to be distinguished from the general mass of Scythic words, which form a large and essential ingredient in all the Tibetan vocabularies. These Scythic roots are archaic and they are in general found in remote N. and N. E. Asian vocabularies. They are chiefly Ugrian (Yeniseian, Samoiede, Ugrian proper, Fin), but some are also Yukahiri, Aino-Kurilian and Kamschatkan.

This class of affinities may embrace eras as long as all the later

ones (Chinese, Mongolian, Turkish) down to the present time, but we must in the actual state of ethnology be content to refer all these remote affinities to one nebulous archaic period which we may term the Ugro-Kurilian or simply the Ugrian. Further research will probably distinguish the Samoiede, the Yeniseian &c from more ancient affinities. A considerable portion of these archaic affinities embrace also Iranian, Caucasian, Semitic and African languages. From their forming so high a percentage, and being the most important of all the ingredients of the Tibetan vocabularies, they clearly connect the history of the Tibetans with that of the ancient Ugrian race, which prior to the predominance of the Tatar branch appears to have spread not only over the whole breadth of Asia and Europe from Kamtschatka and Korea to Lapland, but to India, Irania, the Caucaso-Semitic province and N. Africa, for their vocables are abundantly dispersed over this wide region in languages belonging to various formations. So great must be the antiquity of this cardinal ethnic movement that the origin of the Iranian formation itself in its Scythic basis, may be referred with probability to it. The Mid-Asian affinities of Iranian are Ugrian much more than Tatar.

The large Scythic ingredient in the Tibetan vocabularies when taken in connection with the Scythic character of the ideology, reduces the enquiry into the more archaic history of the formation to this,—were the Tibetan languages originally Scythic or were they crude monosyllabic tongues akin to Chinese? To answer this question we must take the position and character of the Burman branch of the alliance into account, and it leads us to the conclusion that the archaic or pre-Ugrian languages of the Tibeto-Chinese province were closely allied to the Chinese and the crude proto-Scythic; and that they were partially transformed by Scythic nomades advancing into the province and blending with the native tribes, after Scythic had acquired its harmonic and inversive character. At the same time many of the common roots must be considered as of equal antiquity in Tibeto-Burman and Scythic. The Mon-Anam race was probably identical with the ancient Tibeto-Burman, for there was hardly room for another between them, and the languages have some non-Chinese traits in common, as the position of the qualitative after the substantive, the use of prefixed or

proposed definitives, besides possessing many common roots. It is probable that the Mon-Anam was at a comparatively early period pushed to the southward, although not before it had received a considerable portion of Scythic vocables. The Tibetan miscellaneous vocabulary, like the pronouns, and the general ideologic character of the formation, show that it is Chino-Scythic.

An examination of the vocabularies separately gives the following results.

In the Bhotian list we find about 14 vocables with Chinese affinities; 6 with Turkish; 3 with Tungusian; 20 with more remote Scythic and N. E. Asian languages which may be termed Ugro-Kurilian; and 18 which I class as peculiar, simply because I have not ascertained any foreign affinities, but many of which will probably prove to be Ugro-Kurilian.

The Horpa vocabulary differs little from the Bhotian, at least 36 of the 58 words are Bhotian, and 4 of the others are also Bhotian in root; 4 are Chinese (besides 6 which are Bhotian also, making 10); and 18 are neither Bhotian nor Chinese, although 4 of them have Bhotian affinities. Several of the others are Scythic. The Bhotian vocables have, in general, the same form as in Bhotian, but they are softer. Thus *rog ant*, *phag hog*, *metog flower*, *lag hand*, discard the final *g*. In some cases the Horpa form is broader, *e. g.* *rum horn*, *mah fire*. Most of the Horpa forms are found in the Si-fan or Ultraindo-Gangetic vocabularies. *S-gre star*, is a slender form found in Burman *kre*, the Bhotian and Manyak being *s-kar-ma*, *krah*. *Phri snake* is a similar slender form of the Bhotian *s-brul*, Manyak *bru*, Takpa *mrui*. It is also Thochu *bri-gi* and Gyar. *kha-bri*. Where the Horpa form differs from the Bhotian and has special Si-fan or southern affinities, these are indicated in the subjoined list.

Thochu has 24 or 26 words in common with Bhotian, and 3 with Chinese in addition to 5 Bhoto-Chinese. Of the 35 remaining vocables at least 13 (4, 19, 21, 23, 25, *a* and *b*, 26, 27, 30, 37, 38, 40, 46) are Scythic. They are nearly all archaic, that is they are not derivatives from the adjacent Mongolian or Turkish, but belong to the primary Scythico-Tibetan stock. Some preserve

forms now found in the more remote or sequestered branches of the Scythic and N. E. Asian family, Samoiede, Yeniseian, Aino &c. When to these we add the Scythic affinities of the Bhoto-Thochu words it will be seen how slight the Chinese gossarial ingredient is when compared with the Scythic. The Thochu forms of the common roots differ considerably from the Bhotian. They are frequently slender and curt, e. g. 7 ri, B. rus, ru; 15 zi, B. sa; 26 pi, B. phag; 31 ki', B. khyim; 47 ri, B. lam; 48 che', B. chha; 49 pi, B. pag; 51 bri, B. brul. In some cases the Thochu forms resemble the Manyak and not the intermediate Gyarung. *Sky*, mah-to, ma'; *Stone*, ghol-opi, wobi; *Blood* sa', sha'; *Goat*, tsah, tsab; *Light* uik, wa'; *Salt*, che', che; ?*Shin* ra-pi, g-ra. The vocabulary has numerous southern affinities, but fewer than Gyarung and Manyak.

The Gyarung list has 33 words in common with Bhotian, including Bhoto-Chinese words. 5 with Chinese not found in Bhotian (besides 7 Bhoto-Chinese) 4 with Turkish, only 2 apparently with Ugro-Kurilian which are not Bhotian also, and 16 peculiar in the above sense.

The Manyak list has 26 Bhotian words, 3 Chinese (besides 3 Bhoto-Chinese) 4 Turkish, 3 Mongolian, 9 Ugro-Kurilian and 14 peculiar.

I proceed to illustrate the preceding statements by some details.

The Bhotian words in the list of 60 miscellaneous terms, which as some have synonyms and others differ in the old or written and the current or spoken dialects, amount to 78, may be arranged under five classes. *First*,—Words that are apparently peculiar to Bhotian. These amount to about 18 or 23 per cent of the whole, but as there must be many Mid and North Asiatic vocabularies, not collected or not accessible to me, and as even Klaproth's want some of the terms in the list, it is probable that this proportion would be much reduced by a more ample collation of vocabularies. *Second*,—Words having affinities with Chinese, mostly archaic, but one or two appear to have been received from it since the Chinese spread into Tibet. These amount to about 14 (18 per cent). *Third*,—Turkish words, probably derived from the Turkish hordes during their 2000 years of contiguity and partial intermixture with the Bhotians and only amounting to 5, one being Mongolian as well as Turkish.

Fourth,—3 Tungusian terms, probably archaic Scythic. *Fifth*,—archaic Scythic or Upper Asian. These vocables amount to 29 or 30, without reckoning those Scythic words which are Tungusian or archaic Chinese, which would give 5 more. According as we include or exclude the latter the percentage will be 37 or 44, in the last case about double that of the apparently peculiar Bhotian vocables.

COMPARATIVE VOCABULARY OF BHOTIAN.

a. Chinese.

4 *Bird*,—Spoken dialect chya. (Sunwar chica), Chin. chio &c.
6. *Boat*:—Spoken, syen; Naga ihseeng, Ch. ch'hiang. 13.
Dog:—khyi; (com. Tibeto-Ult.); Ch. khiau (Burm. ehhang, shen). 17. *Elephant*:—glang-chen, Ch. ehhiang. 20. *Fire*.—me, mi, ma; Ch. we. 18. *Eye*:—mig, mik; Ch. mok. 23.
Foot:—kang; Ch. kha. 25. *Hair*:—pu; Ch. bo (Fin has *up*, but as there are two other Tibetan synonyms for “hair,” kra and ta, pu is probably Chinese). 33. *Leaf*.—s. hyo; Ch. hio. 39.
Mountain;—ri; Ch. lia; Tungus. alin (allied forms in Mong. and Fin) (*a*). 40. *Mouth*:—kha; Ch. khau. 47. *Road*:—lam, lan; (Newar lon, Sunwar la) Ch. lu, lau. 49. *Skin*:—pag (*b*); Ch. phi, phue. 57. *Tree*:—jon-shing; Ch. shi, chang &c. (also Kamsch., Yenis., Sam., Cauc.) 59. *Water*: chhu; Ch. chui, shui &c., (Sam., Ugr., Tatar, Afr.)

b. Turkish.

30. *Horse*:—ta; T. at. 34. *Light*:—hod; T. syod. 39.
Mountain:—West Tib. dak; T. tak, Japan dahe. 43. *Night*:—tshan, chen; T. achsham, Mong. suni; allied forms in Semitic, Malagasy &c. 46. *River*:—tsung, chang; T. usun, sug; Mong. chun, usun &c. Ugr. jugan, Pashtu scan, sin, sint.

c. Tungusian.

10. *Com*:—s. pha chuk; Tung. chyukun. 12. *Day*:—nyin; T. ininy, manyi. 54. *Sun*:—nyi (See “Day”).

d. Ugro-Kurilian.

1. *Air*:—lung. The Ugro-Scythic forms of this root when used for “air” are slender, but the Ugrian *lun* “day” preserves the

(a) Takpa ri, Horpa ri-rhap.

(b) Takpa phyekhi.

full Tibetan form. 5. *Blood*:—khrag; Ugr. wuorak; Saumali, Galla dik, diga (the root is also current as *water*.) 7. *Bone*:—rus-pa, ru-ko, lu, lu-k, lush-am, lush-yn, by Ugro-Fin, luy, by Sam. Semitic alam, alat, Pashtu lu, ro, ra, re, alukei, Drav. yelu &c, Lesgian. 10. *Cow*—lang; Fin lehmü; Cauc. al; Galla, Amh. lam &c. 14. *Ear*:—na; Cauc., en, in (*Face, Mouth, Nose* &c in Seythie). 15. *Earth*:—sa; Sam. -ja; Zend sa; Horpa zi-p, Gyarung se', Ch. ti, Jap. zi, tsi. 19. *Father*—pha; Sam. &c &c (com.) 20. [*Fire*:—ma, me; Aino abc, Chin. we; (Jap., Ugr., Tumali, Malagasy &c have allied forms.)] 21. *Fish*:—nga, nya; the guttural form ka of Naga, Anam, Mon &c appears to connect the root with the Fin kal, Sam. kual. [24. *Goat*:—ra; Semitico-African aron, illa &c.] 25. *Hair*:—kra: Fin karw; Aino karnu. 25. [*Hair*:—pu; Fin up, Ch. ho]. 25. *Hair*:—ta; Fin ata. 26. *Hand*:—lag; Ost. lagal Turk. ilik. 27. *Head*,—go; Ostiak og. [28. *Hog*:—phag; Iranian, Drav.] 33. *Leap*;—loma; Fin lopa. 35. *Man*:—mi; Fin mis; Galla mi; Zend memio. 37. *Moon*:—lu, da; Koria oru, Chuk. iraluk, Sam. iri. 38. *Mother*:—ama; Yukahiri, Yenisei. Fin, Samoide and common in other alliances. 40. [*Mouth*:—kha; Ch. khan, Yenisei. ko, gon, khan, Sam. ake &c Semitic kho] 48. *Salt*:—tsha, chba; Ugr. sow, sal &c, Sam. si, sir, sak &c (also Iran., Semit., Afr.) 50. *Sky*:—nam; Sam. nom, num, nob. (Ugr., Semit. Kashm.) 52. *Star*:—kar; Korea kurome, Koriak agor, (Iran., Afr.) 53. *Stone*:—do; Korea tn; Ost. to. [55. *Tiger*:—tag, tak; Iran. tigris &c] 56. *Tooth*:—so; Japan cha, ha. In Ugro-Fin the sibilant root is *Head, Eye, Hair, Mouth, Ear*. The Bhotian so is closest to the Fin su *Mouth* (Chinese sui &c). The root is *Tooth* in Caucaso-Semitic and African vocabularies dsa &c Circ., sila, zul-me, sol-mol &c Lesg., sin, sin-an, &c, Semitic (sil, zin is *Eye* in Seythie, sun *Mouth*, shun *Ear* &c.)

ETHNOLOGY OF THE INDO-PACIFIC ISLANDS.

APPENDIX TO CHAP. V. OF PART II.

A.

COMPARATIVE VOCABULARY OF THE NUMERALS OF THE DRAVIDIAN FORMATION.

One.

a. Onra Tam.: *onua*, wunu M., *onji* Tul., *Tud.*; *undi* Gond., *unta*; Uraon; *ort*, *oudang* Male. (Root, *on*).

b. Tel. *vokati*, *Tod.* *vodda*.

On &c. is a very archaic Asiatic particle, and current in many languages as a definitive or article and unit. It is chiefly prevalent at the western and eastern extremities of the Old World. *Europe*:—*en*, *oio*, *wen*, *one* (*wan*). *Africa*:—*nan* Berber, *yeen* Shillah, *wani* Fetu, *na* Ibo, *na-ya* Kishna, *inni-ke* Danakil and Amharic, *adde* Tigre, *inge* Kafir. *N. E. Asia*:—*Samoide* *niot*, *Koriak* *onen* &c., *Kamch* *koni* (Afr. *akun* &c.) It has also made its way into *America*, being found in some of the Sioux and Californian languages:—*wan-che*, *yon-hai*, *na-yeu* &c., *henal* San Raph. (*Kamch*). In the Mongol *ni-ga*, *ni* is probably a pref. (not comp. *Danakil* *inni-ke*). The Tungusian and Samoide *union*, *on* &c. may be related to *on*, but it is more probable that they are connected with the labial definitive. To the east and south of the Dravidian region it is found in the Lau *nua*, *ning*, (also a demonstrative), *Nicobar* *eng*, and in several Asonesian languages.

The exceptional Telugu *vokati*, *Tod.* *vodda*, is a rare but widely scattered combination of two common numeral and definite elements (*Comp.* *afek* Tumbukin; *veike*, *veit* Ugrian; *fito* Japan; *woto* Kaili (Celebes), *motu*, *wakal* Australia.)

Two.

Iranu Tam.; *randu* Mal.; *yeda* *Tod.* (root elided); *yeradu*, *randu*, *erud* Tul.; *evadu* Kar.; *rendh*, *yeradu*, *Tel.*; *ramu*, *Gond*; *e-no-tan*, *Uraon*; (*irat*, *irahui*). The root is evidently *ra*, *er*, *ir*, with or without a prefixed vowel, *nd* being an euphonic augment of the definitive postf. This definitive (varied by the change of the consonant to *d*, *l*, *n* &c.) is one of the most prevalent terms for 2 in Asia and Europe (Iranian). In N. Asia it is rare, but *r* is an element in Mongol, Tungusian and Koriak terms. *Ir*, identical with the Dravidian, is the North Chinese term. In the original Irania *r*, *d* is combined with a labial definitive, and the few E. African terms are evidently of Iranian origin (*Danakil*, *Galla*, *Malagasi* and its numerous Asonesian derivatives). The Georgian *gera*, *dzer*, *ori*, *shiri* "two" probably presents the original of the N. Asiatic and Dravidian terms, because it is regularly formed from 1, to which indeed the *ru*, *ri* &c. properly belongs. The form in "one" *ar*, is still closer to the Dravidian, *ar* being an inversion of *ra*.

Three.

Munru Tam.; *munar*, *musa* Mal.; *mir*, *mudu*, *Tod.*; *muji* Tul.; *miru* Kar.; *muda* Tel.; *munu* *Gond*; *ma-no-tam* *Uraon*; (*musit* *Brasili*, *Comp.* *muji* *Tel.*) (Root, *mu*.)

This numeral (the labial det. *mu*, *wa*, *ba*, *va* &c.) is not Iranian or Semitic. But it is Caucasian, N. Asiatic, and African. *Cauc.* *mi* (combining

ed with s. of 2).: Ugrian *lm, rm* (combined with *k* of 2): Japan *mī* (uncombined). It is not found in the other N. and N. E. Asiatic systems, and it is rare in America (Catawbas *na-man-da*, Salapitin *mī-tai*, Shoshoni *mana-thit*?, Sioux dialects *na-meha*, *lar-b* *nah*, *yeh-mani*). It has also spread into Africa, where it is combined with other particles as in Canc. & Ugr., but it is not prevalent.

Four.

Nangu, *nalu* Tam; *nala* Mal., *nonk* Tud., *nalu* Tul., *nalku* Kar., *nabugu* Tel., *nalu* Gond. (Root probably *na*, and *gu, hu* a second def. postfix.)

This term is not Iranian or Semitic, (but *ar* is an element in the Sem. 4) One of the Caucasian terms approaches to it, *unakayit* (Lesgian). But the clearest and most numerous affinities are Ugrian and African. Ugr. *nila* &c., Afr. *na, n*, *ni*, *mani* &c. (Mandingo &c.), *ne-nol* (Sullom), *inan* (Moko), *mani* (Kosah) &c. From the distribution of the term in Africa and Asia, and the mode in which the elements are interwoven into some of the African systems, it is probable that *na* &c. was the radix of a binary system belonging to a formation that predominated in S. W. Asia prior to the epochs of the diffusion of the Caucasian, the Semitic and the Iranian. It does not appear to have made much progress to the Eastward, as it is not found in the existing N. E. Asiatic and the adjacent N. American languages. In the latter *n* is a frequent initial, but it is merely definitive, being found in 3 and other numbers.

If the root is *na*, and *la, lu* is the poss. postfl., the final *gu, hu, k* must be a superadded definitive. Double and even treble definitive postfixes or prefixes are not infrequent in the agglomerative formations of Asia, Europe, Africa, Aconesia and America, and the Dravirian vocabularies supply instances. The combination of *lu* and *gu* may therefore be purely Dravirian in its origin. *Ga, ka, gr.* is a common definitive final in some of the Caucasian languages, and others which do not use it have imported it as a substantive portion of numerals which they have borrowed from the former. The Georgian *es-gu, 1*, is an instance, the proper Georgian unit being *ar*, with or without *thi*. The Caucasian affinities of the Dravirian numerals raise the suspicion that the final *gu* of the latter had a similar Lesgian origin. The parent system was doubtless formed in S. W. Asia, the great focus of all the Asian, European and African numeral systems; and the present Caucasian numerals are probably themselves derivative from some archaic formation that was not confined to Caucasus and did not originate there, for the plain of the Euphrates, and not its head basin or the vallies beyond, is likely to have been the earliest seat of civilisation in this region.

Five.

Aindu. *anju, anchu*, Tam., *anja, anchu* Mal., *yajj, yajjkh* Tod., *ayinu*, Tul., *ayidu, eidu* Kar., *ayidu* Tel., *caishan* Gond. (Root *ain* or *an* probably, but possibly *anj, anch*).

This is a peculiar term. If the root is *ain*, or *ai*, it appears to be a mere flexion of *na, 4*. If *anj* &c. be the root, the only affinities I can discover are the Caucasian *huktu*, itself an inflected combination of definitives, and the Iranian *pandhan* &c. with the connected words signifying "hand" (e. g. *yash, chay*, Ugrian; *aiu, isu, zhu, sesu*, Chinese, Utraiind. Ind; *hastu, sestu, hath*, Iran.) If the numeral was not derived from Canc. or Iran., but was a direct modification of a word for "hand," the

nearest term is the Taurasian *hanya*, the ancient prevalence of which is attested by the European *hand*.

Six.

Aru, Tam., Kar., Tel., *aru* Mal., *orr* Tod., *aji* Tul., Gond. (Root *a* probably, *a*-ru, *a*-ji, but perhaps *ar*.)

From 5 a new series of simple definitive terms appears to commence. In this respect the Dravidian system is very remarkable, the allied Asiatic and African systems forming the higher numbers by inflecting or combining the lower, adding them to 5, or subtracting them from 10. I cannot but suspect that the Dravidian terms are really disguised inflexions of the lower ones. If this is the case *aru* must be referred to *ira*, *era*, 2, and be considered as a remnant of an original binary system (2, 4, 6, 8), a conjecture countenanced by the great prevalence of such a system in the Old World, and the frequent formation of 6 from 4 or 2.

Seven.

Ezhu, *ezhu* Tam., *ezu*, *yezha* Mal., *yelu*, *el* Tul., *yo* Tod., *ciu*, *yelu* Kar., *edu* Tel., *yennu*, *yetu* gond. If *a* is the root of 6, *e* is the root of 7 *du*, *tu* and *zhu* being the def. or poss. postf. The Tamil *zh*, (French *j*) = *d*, *l* in the other languages. At present I am inclined to consider *e* as a flexion of *u*, or *e*-*du* of *a*-ru.

Eight.

Etta, *vetta* Tam., *etta*, Mal., *yeta*, *eti* Tod., *enane*, Tul., *entu*, *venya* Kar., *enimidi* Tel. The root appears to be *en*, *et*, joined in some of the terms, if not in all, to another particle. I incline to consider the term as formed from 2, 10, by agglutination, a common mode of forming 8 in allied Asiatic languages (Ugrian &c.) If this is the case, *en*, *et*, represents 2 (*era*, *ren*, *yed* or *en*) and the definitive finals represent 10, by vocalic reflection or harmony. Kar. 8 *en-du*, 10 *pa-tu*; Tel. 8 *eni-mi-di*, 10 *padi*; Mal. 8 *eta*, 10 *pa-tta*. The *ini* and *ame* of Telugu and Tuluva may signify "short of," "less," or some other term indicating that the number is 2 short of 10, or they may merely be the *ba* of 10 transformed by the phonetic action of the adjacent sounds. Thus in the highly harmonic Tel. *t-on-andi* 10, may have been *t-on-badi*, *t-on-badi*, and then more euphonically *t-on-midi*.

Nine.

On-badu, *on-bahudu* Tam., *om-badu* Mal., *oram-bo* Tul., *om-bad* Tod., *om-bhattu* Kar., *t-on-midi* Tel.

These words are 1, 10, i. e. 1 short of 10. The Telugu and Tuluva prefix and mix a definitive in *on* 1. (*on* modified by *b*.) The Telugu term is formed like that for 8, and as *on* is unequivocally 1, it strongly confirms the opinion that 8 is formed from 2.

Ten.

Pattu, *oru-paluvu* ("one, ten") Tam., *pattu* Mal., *post* Tod., *pattu* Tul., *pattu*, *hottu* Kar., *padi* Tel.

The root is evidently *pu*, the poss. postf. changing in Telugu to *di*, the nomininal form of its poss. postf. With or without the postf., it is a common N. Asiatic and African term. Af. *pu*, *fu*, *amun*, *uwo*, *fut*, *fut* &c. *met*, (Coptic); Samoelede *bu*, *wi*, *bi*, *bet* (Coptic.)

B.

COMPARATIVE VOCABULARY OF MISCELLANEOUS WORDS OF THE
DRAVIRIAN FORMATION.1. *Air*.

a. *ka*l, A. Tam., *gali*, *ghali*; *katta*, *kattu*, *kott*, Tam. Mal. Tod If the *k*, *g*, of the first term is prefixal and *li*, *la*, the root, it is identical with the Irawadi, *li* &c., Karen *li*, Burm *le*, Yuma *ha-li*, *a li*, *li* &c., which is also Scythic and Semitic. The other postfix *tu*, *ta*, *t* is also a root for "Air," "Wind,"—Gond, *bariba* (H.) *ita*; Male, *taka*, *taphe*; Uraon *tha-ka*, (Comp. Asonesian *to*, *gato* &c., Fin. *at*, Armen. *it* &c.) There could not well be a more striking instance of the extreme caution required in comparing monosyllabic roots. At first sight the Dravirian *gali*, *kat* and the Yuma *kali* appear to be identical, and even the rejection of the Yuma prefix *ka* leaves ample room to contend that the root *li* is at once Ultraiudian, Dravirian and Scythico-Semitic. I think, it is clear, however that *li*, *la*, *tu* &c., are the ordinary Dravirian postfixes and that *ka*, *ga* common to the two terms, both of which are found in Tamil (*kal* A. *kattu* Mod.), is the Dravirian root. As *t* and *k* are frequently interchanged it is probably identical with the Vindyan dental form.—Male, *taka*, *taphe*; Uraon, *thaka*; Gond *bariba ita*. Beyond India the dental form is common as a term for "Air" or "Wind" and the guttural very rare. Polynesian *to*, *Tlanguang tu*; Mille *gato*, Tobl *gutam*, which may be the dental with a definitive prefix, or direct derivatives from the Dravirian *kattu*. It is the most common Scythic root, *at*, *ula*, *wet*, *wola* Wogul, but, in general, it takes a postfix e. g. *utlan* Chuk odduk Tung. *zai*, *zai*, *tuai* &c., Ugrian, Turkish, with which Comp. the African *dah*, *Dafur*. The same root reappears in the Aramenian ot, Sanskrit *vata*, *atana*, Zend *waetam*, Bengali *baus*, Lat *ventus*, Persian, Hind. *bad*, Asonesian *badi* (Sabimba). In Malay *badi* is applied to the spirit of a person or animal that has been killed, and which, it is supposed, will take vengeance on the slayer if a charm is not used to lay it (See a charm used by elephant killers; Journ. Ind Arch. I. 316.) In Malay *badai* is a gust of wind; Kagoayan *padak*; Australian *padra* (Bachurst) (Savk. *badra*), Binua *badara*, Malay &c. *udara*. The Nicobar *batut* is probably the same root with the prefix *ku*, and in the Mangasi *riwatra*, Indonesian *ribut* &c. "storm," "hurricane", it appears to be combined with another wide spread root for "air", "wind" (*ri*, *li*, above referred to.) The only guttural forms I find are Australian *kira*, *kirrar*; New Guinea, *girik*; Woloff *quelo*; Fin *gui-so*; Japan &c., *ka se*; Mongol *kei*; Mon *kie*; Nega *tkhe*.

b. *elca* Kar. A. This resembles the Ultraiudian term (which see for the foreign affinities), but it may be the common Drav. root *a*, with the initial consonant elided.

c. *ambaram* Telug. *amayam* Mal.

Korea, *patam*, *pacan*; Ugrian, *warma*, *barska*, *warwizh* (Wo'o.); *barski*, *merga*, *merz* &c.; Koriak, *walkatti*; Bodo *bar*, Gar *hal*, (see Ultraiudian). It is a common Asonesian root. From the commutability of *l*, *r* and *d* it is probably radically the same as *bad* &c. (*b*).

d. *pavanam*, *weiwa*, Telugu "Wind"

Kashmir *wav*, Pashtu *wab*, Newar *phai*; Ende *wabe*, Australian *wibi*,

wape; Quillimani pevo, Suahili paipo, opipo, Galla bube, afoaw, Danakil baba; Koriak ahangui; Semitic hawa; Kol hoyo, (see Ultr.)

2. Ant.

a. ure, erumdu, irumbu, iripi, erū (the root appears to be *ri, ru* &c., the *m* being a common euphonic augment before *b*.)

Ultrand. lang, rang, mōng &c. *A. mesian*:—Bin. langam, solum, Lamp serem, Sund. Arum, Aru areram, Pol. lo, lolo. The same root is probably contained in the Celebesian biri, here.

b. Tel. chuma, Tul. pūm; Gangetic-Ultrand. chij, chimechi &c. Hind. cheuma.

3. Arrow.

a. kanei Tam, A.

Pashai, Sindhi, kan; Asam kanr, (See M. A.); Koreng. jakyen, Anant ten.

b. ambu, amba, ammu.

This closely resembles the Mishmi. *apu* &c., but the Ultrandian root is *pu*, *pun* &c. and the Dravirian apparently *am*, if it is native. It appears, however, to be E. African. Comp. Suahili *mpamba*, Makua *mpamba*, in which *mp* are prefixal. The root *pamba* is probably connected with the Malagasi *pana* and its Asonesian derivatives, and also with the Sanskrit *bana*.

c. Tul. biru ("bow," Kar. bilu, Tam. vil, Tel. vil-ambu, Mal. velu.)

Sansk. *pilu*.

d. saralu Kar. A.

Although ancient it is Arian. Windy. *sarb*, *char* &c., Naga *lasan*, *lahan*, *san*, Kopus *than*, Siam *luk-san*; Sansk. *śara*, Pali, Bengali, *shara*, *saro*, *shar* &c.; Tungus. *ser-dan*, Koria *sar*; Georg. *isari*.

4. Bird.

a. pul, paracci, paraca, pull.

Angam Nag. *para*; Andi *partie*; Hind. *parinda*, English, *bird*; Galla *afala* &c; Malagasi *vorona*; Asones. *burong* &c. The ultimate monosyllabic root is doubtless the same as the Tibeto-Ultrandian *byu*, *bu*, *vo* &c., but there is apparently no direct connection between the latter and the Dravirian. The *z*, *x*, *ra* is probably the definitive.

b. paki, pika, hoM.

Bengali *pakhyi*, Sansk. *pataka*, Hind. *pakheru*; Dapha *pata*, Aka *putah*, Abor *petang*, *patang*. Fin *pihka*, *poika* (Sansk. *pataka*). *Ason*.—Binua, *pake*, Lamp. *puti*, *putu* ("fowl"). *Pasir* *ka*. The Indian and Indonesian form is probably pre-Arian. The root appears to be the same as in *a*.

5. Blood.

a. chora Mal, chore Kurg.

Tungus *choma*; Gang. Ultr. *chi*, *chai*, *sai*, *asu* &c.; Circ. *sha*, *tcha*, *K. otah*.

b. *sennir*, Tam. A.; *kenniru* Kar. A.; *khens* Ur.; *kesu*, Male; (3 Garo *kan-chai*.) Su. *st*, *chai* &c., is the preceding Gangetic-Ultrandian root, and *kan*, *ke* &c. may be merely the Ultr. pref., Hind. *khon*; Turk. *kan* &c.; Fin *kem*; Aino *kim* &c.; *Ason*.—Nicob. *kanak*, Austral. *kuain*, *komara*.

c. *notturu*, *nettar* Telug. Tul.; *nattar* Gond.; (2 Lau *lent*, *lut*, *let*; *Ason*.—Sunda *lei*, Trusan *elod*).

d. *udiram* Tam. [Sansk. *rudira*].

6. *Boat.*

a. pakada, padana, paru, varji, [Bengali pansî] valam. I place these terms together because they appear to contain a common root, *pa*, and it may be considered uncertain how much of what follows it is merely definitive; *ka-da*, *da-ea*, *n-ji*, *t-am* appear to me to be double pos. fixes of the ordinary kind. Probably two distinct terms, however originally formed, have long prevailed, 1st, *pak*, found in A. Tam. only, and, 2nd, the more prevalent *pad*, *par*, *val* or *van*. Both have been carried to Asonesia,—avauk Pagai; pada waka, Celeb.; paku, poki, Polynes; wangga Viti; venau, wenu Timor; bangka Baliguni; uwang Magind; wangkang Mal. &c. The Indones. prahu, pran, Pol. lalan, Viti vela, may be from the Dravirian *paco* or the Ultrindian *p'laung* (Gurung *plava*). *Pa*, the ultimate root of the Dravirian terms, exists in the Mille, Tarawa and New Caledonia *wa*, Car Nicob. *ap*, Gorontalo *bu*, Nias *bubu*.

b doni, Kar. M.

This name is widely spread along the coasts of the Indian Ocean and Ul. India. *Africa*.—Somali donie, donah; Danakil denniki. Sindhi, Bengali, dingi; Anam, ding; Chinese (Peo chew) tong sampan (danco); Kol. dunga, denga; Marui, Newar, Magar, Sonwar, dunga, donga; Aka bulang; Giaro, reng; Naga, Manip. Kom., surung, rung, p'lung &c., Min Hing, gaton &c. &c. Asonesia,—tina Sumba, Solor, tid ng Kis. (Tilong Miki). The slender form ding, ting, has spread along the coasts. The broad form dnug, dong, rung &c. appears to have a distinct history. In the Gangetic valley the Bengali dingi has superseded the ancient West Ultrindian dunga, donga, still preserved in the Himalayas and Vindyas.

7. *Bone.*

enpu, elumbu, ella, emika, elume, eluvu, elu.

Tibeto-Ultrand. roba, along, rang, aru, aro. *Ason*.—loh, lolor, &c. Semitic alam, alot, adathir; Galla lala; Pashtu aluxet; Laggi, root ra, ro, re, lu.

8. *Buffaloe.*

a. karan, kara, kera. Tam. A., Kol.

Kambojan kar-bu, kra-bo, Chong, ka pao, Ki, kar-pu; Indones. karbau, karabao, kadu &c. The same root is probably found in *gaur*, *gor*, and the Beng. and Hind. name of the wild buffaloe, aina, appears to be a contraction of the Dravirian karan.

b. eruma, enumu, erme &c.

Ultrand. te, reh, m. The root is a common one as applied to the "cow," Seythie, Tibetan, African.

9. *Cat.*

a. pusei, Tamil A. epuchcha, Mal., puchche Tulu., pusi Kol.

pusi, Pashtu, Sindhi, pasha Kashgar; Midehanang pish; Kapwi pishi, pishik; Fio misak, mataka &c. Mong. mechoi; *African*.—mus, musine, topisa; *Ason*.—pusa, Born., Phil; Semitic, bu; English, puss. The posfixed root is probably the Egyptian chai, shai, preserved unaltered in the Mongol mi-choi, Naga mo-ehi, Bodo muji. The other root *mi*, *pi*, *pu*, is also common. In the Tibetan *simi* the position of the two roots is reversed.

b beku, biku Kar., probably the root bi, be (see *a*) with the posfix *ku*.

Afr.—paka, Kiliu; *Ason*.—bika, Buton. The Buton term is Dravirian,

10. Cow.

a *aru*, Tel. Kar., *a*, Tam. A.

The root, *a*, is probably archaically connected with the Tibeto-Ultradian *ba*, *wa* &c. (which see), but it may be connected with the Lesgi *a* *ka*, *a*-*ta*, *a* *h*, (see *d*)

b. *petam*, *petā*, *pasu*, *pasuvu*, *hasuva* *payya*; Singhal. *vesi* The ultimate root is probably *pa*, *pe*, *ve*

T. U. *ba*, *pha*, *wa* &c., as in *a*. Comp. Himalayan, *pit*, *bik*, *bit*, *bi*; Dhimal *piā*; Karen *phī*, *hing*, Khumi *bhi* (buffaloe). But the Dravidian-Himalayan forms, from their possession of the final dental or sibilant, connect themselves directly not with the Tibeto-Ultradian but with the Seythico-Iranian *mes*, *misye*, *mus*, *wanch* &c., (Ugric); *ma-hala*; Tungus; *hos* Latin; *maas* Kosak &c. The Chape, Bodo, Garo and Naga terms are more purely Seythic than the South Indian,—*meshya* Ch., *ma-hu*, *mehu*, Bod., *mashu* Garo, *masi* Naga. The same root is a common one for buffaloe.

c. *tanma* Toda

(Perhaps *tan* has been adopted from *petam* Ult. *tom* Kapni, *atom* Maram.)

d. *akalu* Kar.

Laue. *aka*, *ala* (Lesgi). Probably *d*. is connected with *a*. and *c*. and both with the Vindyan *udu* &c.

11. Crow.

Kaka, *kaki*, *kagi*, *kak* &c. Uraon *khakha*, Male *kako*.

Magar *kag*, Singpho *kokha*. This reduplicated form is perhaps connected with the Tibetan *khata*, but it is one of the most widely spread imitative words. *Kha*, *va* occurs alone and with a second root or postfix *va*, *wa* in Kol and Gond (*kara*, *kawa*, *kahu*), in the Himalayas (*kalwa* Kir., *alwa* Lamb., *kawa* Mirm., *ku* New) Anam *kookwa*. In Kumi *wa* occurs alone. In Asamesan the Dravidian reduplicated form is common, *kaka*, *gaga*, *gagak* &c.

12. Day.

a. *pagal*, *pagil* &c., Gond *pai*; "Sun," *paka-lon*.

Lesgi *bigula*, "Sun" *bak*; Ason.—Australian *baga*, *baga-rin* "sun"; Indo-Chinese *pagi* &c. "morning."

b. *el* A. Tam, *ullah*. Uraon;

Mitch. *la*; Korea, *la*; Korak, *alo*; Arm. or. Iran. *ciere*, *uras*, *hari* &c., Ason.—*ulah*, *alo*, *ira*, &c. &c. Indon; *la*, *ra* Pol.

13. Dog.

a *nayi*, *naya*; Toda *noi*, Gond, *nai*; Male *allay*; Ur. *alla*.

Nayi, *allay*, &c. appear to be contractions of the full ancient Indian form preserved in the Himalayas and Ultradian,—*hangl*, *nagi*, *Mormi*, *nagyu* Gurung, *neko* Mishmi; and its antiquity is proved by its being found in Australian, *nagi*, *nago*, as well as in Samo, *ngaka*. It is Upper Asian, and the terms prevalent there, like the Himalayan, leave it uncertain whether the root is *nak* &c. or *ka* &c. As *na* is a Seythic and Himalayan-Ultradian prefix, and *kui* &c. is very prevalent in Chinese, Tibetan, Himalayan, Ultradian and Asonesian vocabularies, it is probable that *ka* &c. is a distinct root, whether *na* be merely prefixal or a root also. All three occur in Upper Asia,—*inu*, *in*, *Aino*, Japan; *kai* Korea, *nekoi* Mong.; *koi*, *choi*, Lesgi; *nyai*, *nenaki*, *nenakia*

&c. Tungus. The Asonesian *iro, uli, ali* (Indones. Aust. Pol.) appear to be contractions of *kuli* &c.

b. *kukka* Telug.

Kukkur, kutta &c., Beng. Hind. Sindh, but the term is found in Indonesia, *kelo, kito, gida*; in Australia, *keta*, and New Zealand; and it is also Koriak and African. The root *kui* &c. is still more widely spread.

14. Ear.

a. *soei, chepi, kebi, komi, kisi, kan, kada*; Gond. *kaei* (Todava, *ka:i*)

It is doubtful whether *se, che* is a distinct root, or merely a modification of *ke*, as appears most probable. If it is a separate root, it may be connected with the Tibetan *sa*. The guttural is found in Bodo Khomz Deor Ch. *yaku*, Utraiadian *naka, akor*, unless these are derivatives from the Sanskrit *karna*. [in Teonga *karnam*] Hind. *kan*, with which the Drav. is remotely connected. The root is widely diffused. Baraki *goi*, other Afghanistan vocabularies *kan, kad, khad* (Hind); Fin. Samoiède, *ko, ku, uan* &c. Korea *kui*; Tungus, *kunya*; Samoid, *kuma*; Turk. *ku-lai* &c.; Yenesai, *kolo-gan* &c.; Africa, — *gura, guro* Galla. The prevalent Australian *kura, kure, guri*, appears to be connected with the African rather than with the Dravirian form, but as *ku, ra* &c. is a common postfix in the Australian as in the Dravirian formation, the root may be of Dravirian origin. The Georg. *kuri* is close to it.

15. Earth.

a. *nilam, nela, nelan*,

The Utraiadian *ali, le, lai*, may be connected with this root. The Khamti and Tai-lung *nin* is near it. The New Guinee *ena*, Polynes. *one*, may be derivatives. The root is common, — Liberian, Tungusian *na*; Chukchi *nuaa*; Egyptian *an*; Mid.: African *eneh* &c.

b. *pudavi, padsei*; *pulava* Singhal.

Lepeba *phat*; Ason. — *huai* Bool; *butang* Kis.; *budjor* Austral.

16. Egg.

a. *einei* Tam. A.;

Tong. *shulei*, Samoid. *sarnu, beny*; Turk. *simit, semurtla*; Mong. *chara* &c.; Chin. *ch'hun*; Ouc. *hono*.

b. *muttei, mutta, motto, muksha*.

Simang *auku*. If the root is *ma, ma*, as is probable, it is connected with the Mon-An. *pu, pung* &c. (which see).

c. *guddo*,

d. *tatti, totti*.

17. Elephant.

a. *koliru*; *ane, ana, an, eniga*. Singhal. *alia*.

Dhim. *naria*; Kamb. *tava tai*, Ka *kanai*; Burm. *ane, ne*, Indon. *ga-riya*.

18. Eye.

a. *nattam* A. Tam. [prob. from Sanskrit].

Kamch. *eleth*; Koriak, *ilet, lalat*, &c. Sansk. *netram*, Pali, *netra*; African. — *Tuo, nget, Danak, enti, inte*, Malagas *inte* "see"; Indones. *inte, inter, "see"*; Indon. *nihat, libat* "see," Binua "eye". [see T. U. and Mon.-An.]

b. *kan, ken, kannu*, &c.; Gond., *kank*, Male *kane*, Urao. *khan*. Bra. *hui, kan*.

Chin. *gan*; Turk. *karak*; Latin *oculus*; Ason. Pol. *kano*.

19. *Father.*

a. endeï, tandei, tande.

M. A.—Kamb. *ta*, Anam *thei*; Turk. *ata*, *atai* &c.; Chuk. *atta*; Jap. *titi*, Ugr. *atta*, *tuata* &c.; Iranian Cauc. *atta*, *tata*, *dady*, *dad* &c.; *Afri-
cans*.—Mak. *tele*, *atiti* (Jap.) Egypt *att*, (*atai* chief). *Ason*—Indon. *tata-
na*, *tatai*, *atba*, (tua “old”, “chief” &c. is a modification of the same root).

b. appa, Kol. *apung*.

Himal.—Ultr. *appa*, *abu*, *abo*, &c. Tib. *pha*, *apa*; Mon. *apa* &c.; Ko-
riak *apa*; The root *pa*, *ba*, &c. is almost universal.

c. ammo.

Tungus. *ami* &c.; Cauc. *emen*, *ims*; Georg. *mama*, (Drav. “uncle”),
muma, *mu*. The root *ma* &c. is common, but generally applied to “Mo-
ther”.

d. achcham.

Sam. *esem*, *ese*; Jap. *tsi*; Ugr. *isi* &c.; Turk. *asio*, Mong. *eseye*;
Ghara-ais [see Mon. An.]

e. eyyan. This term is perhaps a softening of *d*., but there are simi-
lar Asiatic and Asonesian roots,—*aya*, *ayu* &c.

20. *Fire.*

a. azhal.

A. Sam. *shu*, *siu* &c.; Turk. *oth*, *ot* &c.; Cauc. *za*, *ise*, *mza*, *mze* &c.;
Oset. *sing*, Pers. *seng*; Georg. *zezhli*. Hind. *atash*, *shuala*; Semitic,
asat, *isat* &c.; *Asones*.—Sim. *us*., Komr. *husok*.

b. nerupa, nirpa, nippu.

Arabic, *nar*; (Kashm. Hind., *nar*.)

c. tiyya, tu.

Turk. *ut* &c.; Ugr. *tu*, *tui*; Tungus. *toh*, *tua*; *Ason*.—Indon. *tui*,
tupo (Phil.) *uta*, “heat” New Guinea; *uda*, New Caledonia. (see *a*.)

d. benki.

Singpho, Nag. Gar. *van*, *ver*, *wal*; *Asones*.—Pagai *vange*.

e. kechchu; Gond. *kis*. Male *chiche*, Ur. *chik*.

Yenes. *khott*; Turk. “heat,” *hus*, *kos*, *husu*; *Asones*.—Pol. *kasa*.

f. Kol singil, sengel, (“Sun”, “Day” *singi*. See *a. sing*, *seng*.)

21. *Fish.*

a. puzhal. (? Iran. *matsya*, *piscis*, *visch*, *fish* &c. Circ. *psis*; but the
Drav. root is probably *pu*.)

b. min, minu, Goudi, Male *min*, (Sansk.) Chong *mel*.

c. chepa.

Sam. *chale*; Yenes. *ise*; Ugr. *z-a*, &c.; Cauc. *chua*, *psis*, *besuro*, *cha-
ve* &c.; Arm. *tzugn*, Semitic-African,—*asa*, *asa*, *said*; Malagasi *hazan*.
Ason—Indon. *isa*, *usan*, *isi*, *isda* &c. (African-Sem., Malagasi.)

22. *Flower.*

a. alar A Tam. (? G. U.)

b. pu, pua, puvu, buva; Male *pup*. Ur. *phup*. Kol. *baba*, *baba*, *bowh*.

G. U. *Sunw phu*, Lamb. *phung*, Kar. *bungwai*; Ultr. *puu*, *pu* &c.
Chin. *fa*, *we*; Semitic *pul*, *ful* &c., African *wah*, *pau* &c., Malagasi
vong, *vuna* &c. (*Ason. vana*, *bunga* &c.)

23. *Foot.*

a. kazhal A. Tam., *kata* Kol.

Kas. *kajat*, Karen *kha*, *kho-du*, Tangk. *akho*, *ake*, Kumi *akok*,
akauk; Cauc. *kok*, *kog*, *kash*; Oss. *kach*, Georg. *kuchchi*, Lasi. *kassi*,

ka-hohe, kusha; Afghanistan,—*khu* Deer; *Ason.-Indon.* *kasa, kaja*; *Kacha* &c.

b. ali, ori, adugu, hajji, hejje.

Abor. ale; *Cauc. rori* (? *Africo-Asonesia tina, dina, tana* &c. see *Mon.-An.*)

c. kal; *Gondi kolk, kov.*

Tib. kang, Kashmir. kor, kwar, Hind. gor; *-Ason.-kokor* (*Batan.*)

24. Goat.

a. vellei, yalledu.

If the root is *re, ra*, it is connected with the *Ultraiidian be, pe* &c. (Egyptian and African *be*) which has spread into Indonesia. The immediate affinities are African,—*feel* Ambarisi, *ipuri* Makua, *imbuluri* Kosah, *kayiri* Malagasi, *dulala* Danakil, *iwureh* Yoruba &c. But the root is a Caucasian and Iranian one for "sheep". Caucasian *well, mall, botl*; Bengali *mera, bhera*, *Hind. bher bhera* *Sanak. Indonesian biri.*

b. meka (see *a*?)

c. edu, adu, adu; *Uraon era*. This is one of the roots for "cow".

d. kuri; *Male kre.*

Ultraiidian mikreh, makre Tangk.; probably derived from the *Hind. bucri*.

25. Hair.

a. kuzhal, A. Tam., kudalu.

Cauc. kodi; *Tib. kra, Singp. kara.*

b. mayir, mir, tala-mudi (tala is "head"); (*Hind. mar*)

Korea muri; *Austral. mori.*

c. ventruka.

d. orama;

Ost. warras; *Georg. nero*; *Arm. law*; *Ason.—Austr. urap*;

e. tali *Male (tala, "head") Drav.*)

26. Hand.

a. tol.

Sam. utal, ulam; *Kamch. tono*; *Yenes. ton*; *Turk. adem*; *Cauc. tando*; *Afr.—tan, tano* &c.; *Ason.—tong, tang, tangan* &c.

b. kol, kayya, kayi, cheyi; *Gond. kail, Ur. khakhah.*

N. Tangkul akhai, kuit, Bodo khai, Khumi akhu; (*Mon., Anam, tai, Kamb. deih*)

N. Asiatic, Seythie, Cauc., Iranian, Ultraiidian &c. kata, kal, kar, kak, kuik, kua, &c.

27. Head.

a. senni:

Malagos. saino; *Sansk. shira, Cauc. sh'ha.*

b. talei, tala, tale, tare; *Gond. talla.*

Magar mi talu, Kir. tang; *Malagasi tale*; *Rotuma thilu*; *Lasi. ti.*

c. munde, mudd (*Hind.*)

28. Hog.

a. kozhal A. T.; Male, Ur. kis.

Circ. kashka, kaho, (root chea, cho, cha, kha, ka, chum, ton; *Os. Pers. chuy, Arm. chos)*; *Malagasi kisoa*; *Mong. kachai*; *Semitic khaizir*; *Breton guis*; *Ason.—kuis* (*Batan.*)

b. panri, panni, panti, handi, panji, poti; *Gond. paddi.*

(? *Felap tunc, Serakoli bula.*) The *Drav.* root appears to be *pa* (*a*)

being frequently inserted before *d*, *r*, *j*.) If so, it is Himalayan, Ultra-indian, African and Asonesian.

29. Horn.

kodu, kombu, komba, kommu, kurr.

Sonw. *guro*, Him.-Ultr. *kung, gong* &c., Chin. *ka* (Ultr. *ind kan* &c.); Ugr. *kaka*; Semitic.-Afric. *gung, garong*; Iran. *garn, corna* &c.; Lasi. *akra*, Georg. *nka*; Ason.-Sumba *kado*.

30. Horse.

a. payira. This term is confined to A. Tamil. It is probably connected with one of the words for "Cow," *payya* Mal., *Kurgi*.

b. kudirei, kudira, kudure, kudare, kudre, kudar.

Beng. *ghotu*, Pashai *ghoda*, Deer *god*, Tirhai *kurra*; Yenesai, *kut, kus, kon*; Ug. *kon*; Sam. *kunde, yuda*; Bokhara *ghunt*; Caucas. *kota, kooto* (Ani); Ason.—*kada*. The other Scythic form of the root *kon*, is found in the Manipuri dialects,—*chakon* Koreng, Maram, *sagal*, Champh. It corresponds with the Mizjegi *gaur, gour*, Hind. *ghora*, Naga *kor*, Changlo *korku* &c. [Welsh *goriwydd*.]

31. House.

a. illam, illu, illa, arra; Gond *ron*, Ur. *erpa*, Kol. *ora, oa*; (Him.-Ultr.)

Jap. *ire*; Iran. *ulaya* (Sansk.) *aula* (Latin) &c.; Afric.—*arre* Danak. ille Yorub. Ason.—*Simang hale*, Pol. *hari*, Rotuma *ri* (Lepcha li).

b. munei, mune. (? Circ. *wuna*.)

c. vido, wido; Male *ava*.

32. Iron.

a. karambon, irumbu, irumba, inumu, karba, (Him.-Ultr. *yogic, yagarah*, &c.)

Cauc. ger. *Afr.*—Haus *karufa, karife*, Shangalla *sha-kar*; Iran. *iron*. The Drav. root appears to be *run* or *ru, na*, with or without prefixes and postfixes. It occurs in Samoide *ur*, Milchanang *run, rung* (a nasal being frequently postfixed in this language.) Hind. &c. *luha*.

b. kabina, Karn. *panna Urao*, (the *bon* of *ka-rum-bon* may be the same root.) Kol *merhd, merhad, medh, marhm*; Lepcha *panjing*; Georg. *beresh*; *Afr.*—Galla *sibila*, Saumali *bir*, Danak. *birre*, Galla *beret* [Georg. *beresh*, Kol *merhd*.] Amb. *berut*, Malag. *vi*, Egypt *ba*; Iran. *terrus*; Ason.—New Guinea *puruti* (E. Afr.); bilaka Buton, *bunjil Pamp*, *pungal Tobi*.

33. Leaf.

a. adei, elei, ela, ele, ire, arr, ela. Male *atge*, Ur. *athha*; Bodo *lai*, Maram *alui* (see Tib.-Ultr.)

b. aku, Gond *aki*.

Chin. *ge*; Turk *kaak*; Ugr. *kor, kuar* &c. Cauc. *g'a*.

34. Light.

a. oli A. Tamil. (? *b*.)

b. veicham, veluturu, belaku, pelch; Gond *berachi*, Ur. *billi*, Mai, *aveli*; Dhimal *wavai*; Manip. D. *war* (see G. U.)

c. bhaksha Tul.

35. Man.

a. makana; ganasu.

Lau *kon, khun*; Ugr. *watan, kalam, kom*; Yukahiri, *kunshi*; Cauc. *konachoi*; *Afr.*—Sushili *nnuke* "husband"; Shangalla *gunya* (Yukah.); Ason.—Kane, *tane, kanuka, kanchu*; Ach. *akam* "husband".

b. al, alu; Ur. allu, Kol. horro, horh, ho; Mon. haru, kru, Ka hlos
Burm. lu; Turk. ir, iri, er, irini; Ugric. alma ulma &c.; Cauc. olo-
chau-ehi; Arm. uir; Germ. er; Afr.—Mak. alo ana, Malagasi lahi,
olona, Egypt. rumo &c. *Ason*.—Austral. Leah, leh, iure; Born. are.

36. *Monkey.*

a. kaduman, kurangu, korunga, koti, kadaga, kodan Bodo Mochara.
Arabie kirthi, Mahra garat; Afr.—golo. *Ason*.—Indon. kara, kra,
gere, kodeh, gudeh, kato, kita.

b. manga, munge; Male muge, New. moko (Murm. mang &c. Hind.
maimun).

Ason.—monyit, mona, amo, &c.

37. *Moon.*

a. pirei A. Tam; Male bilpei.

Bodo, nokha-bir; Cauc. ports, bars, bers; Afr.—Galla, Tigre werbe,
Danak. herra, Felup fylein, Malagas. volana; *Ason*.—vola, bulan &c.

b. tingal, tingalu

Korea tal, Ug. tilage, toles, tilos, Samoide diri.

c. nela.

d. zabilli. (The root *bil* is *a*.)

38. *Mother.*

a. inzal,

Turk. ini &c.; Tungus. enei &c.; Fin. ene; Cauc. ila, illi, ennin, ninu,
nena, ana; E. Africa. ina, unina, inani, Malag. nini; *Ason*.—inu, inde,
inda, &c. &c.

b. tayi, ayi (Father *a*.) Male aya, Ur. ayo, Kol. iyo, aang, engan;
Lhop, Asam ai.

c. amma, (Father *a*.) Tib. Him.

d. appa, avva (Father *b*.), Gond aval.

Manip. apu, avu, apwi.

e. talli (Father *a*.)

39. *Mountain.*

a. varei, malei, mola, mala panu; Kol. baru, Ur. parta.

Kir. bhar; Samoied bore, berr; Fin. ware, wuori; Turk. uba; Cauc.
mehr; Sansk. parva.

b. konda, gudda, gudde, konom, lunnu.

Marmi kung, gang. Newar gun, Gur. kwon &c.; Yenesei konony,
kar, kai; Turk. kirr, Pashtu gar; Fin. gora, karuk; Sansk. giri &c.;
Georg. koj, kinde; Pers. ku; Afr.—Galla, gara; *Ason*.—Indon.
gunong, &c.

40. *Mouth.*

a. yayi, vaya, bayi, payi; Ur. lai.

Cauc. bak, bagga; E. Africa. afa, aot, af, ma, Malagasi vave, vava;
Asones.—fufai, baba, vivi, ba &c. (Malag.)

b. noru; (Mugar nger; Manip. mur, mor, mai.)

Sam. nal, an; Yakub, Tungus anya; *Ason*.—ngari, nganga, anka,
Austri. ngan.

41. *Mosquito.*

a. kosuru, kudu, *Ason*.—Sumatra agas; Pol. kutu.

b. domo.

Ason.—Bis. tamo,

c. solle.

(? Tib.) *Ason*.—Kaili sani, Mur. I. sonney.

42. Name.

per, pera, peru, pesaru, hesaru, pudar; Gond batti paral.

43. Night.

a. al, ira, iralu, irul, ruz, reyi.

(G. U. hor, mula, ngayul. walo &c., Malagasi alina, aline; E. African bara. *Ason*.-mariri, bouli &c.)

44. Oil.

neyam, ennei, enna, nune, enne, enu; Gond ning; Liab ningo (See T. U.)

45. Plantain.

a. vazbei, vazha, bale.

Korea phatshyo, Semitic muz, mis; *Ason*.—Indon pisang (Malira mis.)

46. River.

a. varupunal, aru, [Arm. Egypt.] eru, yera; Kol gara?

Manip. D urai, Tungus amar, bera &c.; Mong mura, muraz; Turk. muren; Fin wire; Cauc. kor, hor, or, Georg. or uba; Arm. aru; Pers. arga; Semitic bahr; E Afric.—mura (Makua), mulo, bolau, Egyptian aru; *Asones*.—umala, brang, wara &c.

b. puzha, pa, pole, hole (G. U.)

Sindhi wah; Afr.—Galla aba, Shangalla epucho.

c. tude.

Manip. D tu ("water"); Sam. to &c. &c.; Afr.—Yoruba ado. [A widely diffused root. See T. U.]

47. Road.

a. neri, dari, dora, (see T. U.)

b. vazhi, pade, hadi, sadi, batte, (Iran. path, padavi, wat, bat, &c.)

c. Ur. horah. Kol horn, horen, hor, da-hari. Gond. sarri; ? b.

? Malra horom &c.; Georg. shara, gsa; Pers. rah, sarak, (Kurd re,) see T. U.

48. Salt.

uppu, uppa, upp, (Mon bu.)

49. Skin.

a. adal, tol, tola, tola, tovala, toria, Gond tol; Diimal dhale.

Ugr. towl, tuulye; Turk. tari, tire, dari &c.; Afr.—Galla itille; [? *Ason*.—Pol. kili, gili, Indon. kuli, kulit &c. (Sansk. kriti.)]

50. Sky.

a. vin, vanam, manam, minna, bau, bonu (Ultr. Lau, van, fon, fa, Lungkhe wan, wyn &c.)

Ugr. menen, pil; Turk. awa, pielts; *Ason*.—wono, Austral., awan Sabimba, Sambawa, wang Madura, banua Nias, also "country", "land" in this and other Vocabularies, awan "cloud" Malayu &c.

b. mugitu (? megha "cloud," Sansk.)

51. Snake.

a. kadsezi.

b. pambu, pamba, pama, paru, havu, pamb, pab, para-punu (See T. U.)

52. *Star.*

a. vin-min, van-min, minganna, minn, pone-min, Mal. bindeke; Ur. inka, Kol ipil, epil;

Burm. min-ong (U.); Ason.—bin-tang.

b. chukka, chukki.

Yenes. chogen, Ug. chus &c., Cauc. zuka, za &c.,

c. daraya (Hind.)

53. *Stone.*

a. kan, kal, kalla, kallu, kal.

Kamen. kool, kool &c.; Yukahiri kell; Fin kalle; Cauc kern; Arm. khar; Pashtu kasi, Sindo kod; Ason.—kam N. Austral.; kala Pol. (karang lalon, "Coral", &c., but this may be from karang, a made thing &c.)

b. rayi.

54. *Sun.*

a. pakalam (See "Day.")

Yukahiri bugon-sho, Cauc baak, bak, buk, "Day" bu, bigula. Afr.—Shangalla wuka, Galla &c. wak, wakhah "(God)"; Ason.—Australian bagarin, haga.

b. podlu, hottu, polutu; Ason.—? Pol. polotu, "heaven"; Kugayan bilak.

c. pallilli, (? *b.*)

55. *Tiger.*

pul, puli, huli, pili, pirri; Gond. pulli.

Koria pon.

b. nari.

Burm. nira; Semitic nahar &c.

56. *Tooth.*

a. eyiru A. Tam.

Ason.—Austral. yira.

b. pal, palla, pallu, hallu, pall; Gond. palik, Male pall, Ur. pall.

Uyr. pane, pankt, ponk, pu, pia &c.; Cauc. kbili, kibili; Ason.—(see S. U.)

c. kuli.

Cauc. kerchi; Ason.—kuni. Kis.

57. *Tree.*

a. sodi, chedi, chettu.

Cauc che, peha, kehad &c. (see T. U.)

b. gida.

c. maram, mara, men; Gond. mara, Male, Ur. men;

Afr.—Makua mere, Kwil, mure; Hind per.

58. *Village.*

a. pekkam (? Mal. Jav. pakan "markov".)

b. ur, uru, Gond nar.

c. tara.

d. desam (Arian).

e. palli, halli.

f. moda, mort.

59. *Water:*

a. punal, vellam

? Hind. pani &c., Indones, bana, banyu &c.

b. tantu.

Oss. dun, don (see river c.; T U)

c. nilla, niru, nir, (Sanskrit nir.)

60. *Yam:*

valli (Ultr. bal, wiru, berha &c.)



ETHNOLOGY OF THE INDO-PACIFIC ISLANDS.

APPENDIX TO CHAP. VI. OF PART II.

A.

COMPARATIVE VOCABULARY OF THE NUMERALS OF THE MON-ANAM FORMATION.

One.

India,—*moi*, *midh*, *miad*, *mia*, *mi*, *mea* (Kol, Gond). *Ultradindia*,—*wei* Kas; *muo*, *maai*, Mon; *ho* Karen; *po* Angami Naga; *aina* Singha; *moe* Kamboja, Ka, Chong; *mot*, Anam. *Malay Peninsula*,—*mui* Besisi. *Asimesia*?—*amui* (2) Mairasi; *labui*. Bruner I. (2). *Mui*, *moi*, *moe*, is probably the oldest of these forms. *Africa*,—Kicamba *umue* (Suah. *mo-ja*, S. Af *mu-sa*, *mo-ehi* &c.); *Akuongo*, *ema*; Cam. *mo*; Nuba *wa-run*, *wee-ra* &c.; Rungo *mo-ri*, Benin *bo*. *N. and M. Asian*,—*om*, *uem*, Samoied; *emu*, *omin* &c. Tungus.

Two.

Ind.,—*bar-ia*, Kol, *bar-ea*, Gond. *Ultra*—*ar*. Kasia; *ba* Mon; *bar* Ka, Chong; *pia* Kamb. (3 of Kol); *hei*, Anam. *Mal. Pen.*,—*be*, Simang; *mar*, *ha-mar*, *ma*, Binua. *N. Asia*,—*mal-goh*, Chukchi. *E. and S. African*,—*hiri* &c.; *W. Afr*—*fire* &c., *Akuonga*, *epa*; Cam. *be*; Karab. *ebah*; Rungo *mba-ni*; Calb. *ma*; Mok, *iba*; Bong. *baba*; Bin. *be*; Ib. *aboar*, *abo*.

Three.

Ind.,—*op-ia*, *p-in* Kol. Gond. *Ult.*—*pui*, *pai*, Mon; *peh*, Ka, Chong; *bai* Kamb., *ba* Anam. *Mal. Pen.*,—*wiup*, Sim.; *am-pi*, *am-pe*, *am-pet*, Binua.

I can find no decided foreign affinities. The term (*pui*, Mon, *wui-p* Simang) appears to be a flexion of *mui* 1. The Binua form appears to have been modified to accord with the Malay *am-pat*. 4, the Binua terms above 3 being Malay. In the extreme N. E. of Asia and the adjacent Polar American languages of the same formation, *pi* is an element in 2, *pi-gayut*, Chukchi, Eskimo. It does not occur in N. American formations.

There is a distinct term for 3, having a very limited range,—*lai* Kassia; *lui*, Car Nicobar; *lulu* Nankowry. Unless the Namsang *van-ram*, *Mu-lug* and *Tablung lem*, are connected with this word, it has no other direct affinities that are very obvious. The following terms may be related to it;—Kassia *han-dai*, *hon-dai* 2 (? 3, 3; *ku* is 6 in Kuki, Karen &c. but here it may be merely the Kassia prefix *ha-*, *d* and *r* being frequently preceded by *a* in Kassia); *rai*, S, Bongju, *roe* Kuki [See EIGHT]. There is another, and, as it appears to me, more probable explanation of this form. If the basis of the Mon-Anam system was strictly binary, and *pui*, *wui*, is simply *mui*, 1, a little disguised, the Nicobar *lui* may be the original form of the Kasia *lai*, and, like *pui*, a mere variation of *mui*.

Four.

Ind.—*pon-ia*, *u-pun-ia*, *u-pa-ia* Kol; *o-pun-ia*, *u-plam* Gond. *Ultra*;—*pon*, Mon; *pon*, Chong; *puan*, Ka; *luan*, *boan*, Kamb.; *bun* Anam; *fuan*, *feun*, *len*, Nicobar. (? *lemang*, Simang).

This numeral is very remarkable. It is a modification, found in *Aso-nesia*, of the Africo-Malagasi term which, in another form, has spread

so widely over Asonesia. *Mid.-Africa* (Hausa, Galla, Saumali, &c.) fulu, fulu, ofur; Malagasi *efar, efad* &c. *Asonesia*, *an-fa*, Nias; *an-far*, Keh; *hai-phar*, Tanne; *fun, fung*, Caroline; *far-fat* Marian; *owang* Pelew; *hadi*, New Guinea. The more common Asonesian form is the dental put, *am-pat* &c. The root is Egyptian and Iranian (*štu, four, chat-rur, fusa* &c.). It is simply a variation of the similar root for 2 (i. e. the dual) of 2, as in other binary systems). The Ultrindian and Indian forms cannot be derived from the Iranian *chat-rur*. They are evidently connected with the ancient Asonesian form prevalent in Micronesia and derived from Malagasi. Taken with the fact that the terms for 1, 2, (and 3, if a mere flexion of 1) are also African, they afford some proof that the same long enduring western civilization which carried Malagasi and E. African words to Asonesia, at one time embraced Ultrindia in its influence.

Five.

san, Kasin; *pa-sun*, Mon; *thanin, tuni*, Nicobar; *chang*, Ka. The *Tan bu* appears to be a modified contraction of *san, tha*. The Kuki *sun-ka*, Bongju *tsur-tar*, Car. Nicobar *sum*, 10, is probably the same term. It is African, being found in the same formation to which the Malagasi owes so much, and from which the previous Vindyan terms may also have been derived.—Galla, Saumali, shan, zan. That it is an ancient Mid-African root, belonging to a diffusive civilization, is evinced by the progress it has made to the Westward and Southward. Binin, *tang*, Papah *at-tong*, Cam. *ma-tan* (this language has also the Vindyan and Ultrindian 1, 2), Calbra *son-ai*; Rungo *otani* (Comp. the Nicobar forms); S. African *sana, tam*, &c. The same root is also Samoic, Tongusian and Avestian (*sam, tong, chang, san, sun*) an Asiatic distribution which shows that its diffusion in Asia and Africa was anterior not only to that of the Iranian, Semitic and Caucasian, but to that of the prevalent Scythic numeral systems. Radically the word signifies "hand". It is found with this sense in Dravirian as in many other languages.

In the Monam basin a second term is preserved, *pram*, Chong, Kamk; *nam, lam*, Anam. The root appears to be *ram, lam, nam*, and *p* to be a prefix, as in Mon. The Nankowry *lam*, 10, is the same term.

The Vindyan term is *mor-la, mona-ya, mone, mo-ya*, Kol; *mun-ia, muna-e* Goud, which may be an inversion of the Kambojan and Anam, or *eice versa*. If the Mon term had been Tibeto-Burman, there would have been grounds for identifying the Vindyan and Kambojan vocables and considering theta as representing the original Mon. But as the Mon term is native or African, this explanation appears to be inadmissible. If the Vindyan term has displaced an older one of Mon origin, it may have been derived from the Tibeto-Burman *pungu, phungu*, Naga; *bonga*, Garo; *phong* Mikir &c.

The Kambojan and Anam term is not only found in the Nankowry *lam*, 5, but in Daphu *rang*, 10, Mon, *klom*, 100 (Ka *dam*, Anam *tam*) and in shorter forms, *ra* &c., in the Naga dialects, Garo, Mikir, Bongju, Kuki, Kambojan, and Lau, with the power of 10, 100, 20 &c. All these forms appear to be referable to the binary nomenclature, which some of the terms for "eight" prove to have co-existed with the quinary. *Ram*, 5, is probably an abbreviation of *ra-ma*, that is *ra* 4 (or 2 dual) and *ma*, 1. In the same way the Vindyan 5, *muna* &c., may be a flexion of *pua*, 4. From the evidence afforded by some of the higher

numbers that the Mon system used both the binary and quinary methods of expressing those numbers, a usage by no means singular, I have little hesitation in referring both the Vindyan and Kambojan terms to the single Mon-Anam system.

Although I can find nothing to warrant the opinion that the Vindyan and Kambojan languages might have obtained separate terms from East Africa, for I have no doubt that all their African terms were received through the Mon, it should be remarked that analogous words are current in some African vocabularies. The true explanation, I conceive, is, that the African terms in question are formed from the same binary definitive roots, *ma, ba &c*; *ra, la, na &c*. A Sushili dialect has *manut*, and to the westward forms similar to the Indian and Ultraiidian occur, —*mun*, Bullom; *mu*, Kru; *num*, Akin; *aum* Amina.

Six.

The Vindyan terms, like some of the Ultraiidian, appear to be Tibetan. *Ind.*—*tur-ia*, *turu-ya*, *tavai* Kol; *turm*, *uruma* Gondi. The Gondi has an exceptional term *sa-rong* (*sa* is a prefix in 5 also, *s-aij-an*; *yaif* Toda) which appears to be simply *ru* of the Kol dialects nasalised. But it may be directly derived from the Naga form *so-tu*. In the Gawil form the *ny* becomes *m*. *Ultr.*—*ka-rao* Mon; the *Bongju*, *Kasia*, *Barua*, *Sing-pu*, *Chong* and *Ka* terms are all similar antique modifications of the Tibetan. The *Ka-rao* is a derivative of the Mon. The *Chong ka-dong* is a nasalised form similar to the Gondi *sa-rong*. In *Bodo*, *Dhimal*, *Bongju* and *Naga*, forms in *t*, *d* and *r* also occur.

The anomalous terms are *tha-ful*, *te-ful*, *ta-fad* Nicobar; *shank* Kyeng; *sau'* (abrupt accent for 4) Anam. The Nicobar term may be composed of *tha* 5 (from *thanin*) and *ful*, *ful*, which should represent 1. A similar term for 1 does not exist in the Indian, Ultraiidian or Asomesian province, save in the Egypto-African *wotu*, *notu*, *mon* &c. but in the latter it is used for 10 (i. e. *one* tale). It is probable therefore that *ful* is a Mon-Anam binary term formed flexionally from *pu*, *fun*, 4. *Tha* may either be from the previous term on the repetitive principle, or it may be the Mon-Anam prefix. *Shank*, *sau'* has a deceptive appearance of affinity with a wide spread African, Iranian, Caucasian and N. Asian term, the final of which is generally *t*. African, *shita*, *sita*, *soda* &c.; Semitic *shat*, *bat*; Ugr. *chut*, *bat*; Iranian *shash*, *sochs*, *six*. But it is merely one of the numerous variations which the Tibetan root undergoes. The original may have been the sibilant *thauk* or *thuk*. The Rakhoing *khrauk* preserves the broad vowel.

Seven.

Mon, *ka-bok*; Ka, *pah*; Anam, *bei*. This term is a flexion of 2 (the word for 5 being omitted, as it is in most of the other formations). I have already mentioned that most of the Ultraiidian and Himalayan languages adhere to the Mon-Anam quinary principle in forming the term for 7, and that a large number of them indicate the commencement of the higher series of numbers, or those above 5, by the prefix (generally *ta*, *ka*). Lepcha preserves *ka* in all the terms from 6 to 10; and Kiranti, which, in its word for 2 (*ka-sat*), retains an ancient root which reappears in other languages in terms for 4 and 8 (i. e. *sa* Namsu; *g* Naga), has another archaic term in *bhag-ya*, 7, which is evidently the Mon *bok*. The Nicobar *sat* might appear to be Hiti, but as the Nancowry dialect has *ka-kiat*, which resembles the Lau form of the Chinese term (*chiat*),

sat is probably Chinese also. The Chinese root is very widely spread (Ugrian, Iranian, African &c.)

Ind. *i-ga*, *e-ia*, *i-air* Kol; *u-ga*, *u-iaah*, Gond. (Some Kol dialects have taken Hindi terms). This is the Dravidian *e* (*e-zha*, *e-l*, *ye-du* &c.)

Eight.

Ind. *iral*, *ir* *ia* Kol; *ihar*, *clar-ia*, Gond. This term appears to be an archaic binary one, a flexion or reduplication of the Dravirian *ir*, and to be related to that for 9 and 10, as in the Dravirian system.

In some of the Uraltaidian and Himalayan languages the term for 8 is a similar flexion of the ancient Mon-Anam root in *r* for 2 or 4. It is found in the Yuma group and the Nicobars,—*rai-kar* Bungu: *rai* Fuki; *raih* Kasia; *awera*, *Or-Nool**, Kiranti, *re-ya*; Marmi, *Gu-rung* pre (comp. 4, *re*, *pli*, &c.)

The other prevalent terms appear to have been adopted from the Chinese. The Mon *ka-cham*, Ka and Anam *tam*, appears to be the Chinese-Tibetan *sum, tum, tam* 3 (5, 3) on the same principle that 7 is 2 (5, 2) in many of the Uralindian and Himalayan languages. The Burmese *shit, si*, Chong *ka-ti*, Kyong *shat*, Singpho *ma-tsat*, Naga *cheth, chet, thuth, chat, sat, sep, te, tha, Garo chet*, probably involve a misapplication of the Chinese term for 7, *ch'it, ch'iet, sit, thet, tsieh*. The Aber-Miri *pu-nit-ao*, Miri *phye*, Daphila *phye-nag* are 4, 2. Binary terms for 8 appear to have formed the limit or highest number of the scale at one time, for they have been applied to 10 and even 100 [See *Ten*.]

Nine.

Mon, *ka-chit*; Ka, chin; Anam chin; Karen chi. This is the Chinese 1, i. e. 1 short of 13, as in Dravirian and Mikir. The Chong *ka-sar* is peculiar. It is perhaps from the Chino-Tib. *san* 3.

Ind.—ar-ea, ar-e, ar-he, ar-ah. Although *ar* is apparently a flexion of the *ir* of 8, which is 2, it is probable that it represents *i*, as in the Dravidian terms. In the Male *ar*-1, the Drav. *on* takes a vibratory form, and in Tulava the common term for 9, *om-bodo* (*i*, *e*, 1, 10), takes *or* as a pref. (*oram-bo*).

Ten.

Ind.—*gola*, *gel* Kol, *gulra*, *gil*, Gond. The Augami and Mozome-Augami *kerr*, *kurr* resembles *gel*. *Kerr* is evidently a derivative from the Naga *thelu*, *tern* &c. The only analogous foreign form appears to be the Chukchi *kulle*, and both are connected with African terms for 1 (*kulle*, *Sakko* &c.) *Hissi*, 20, is evidently the Hindi *bis*, the commutation of the labials and the aspirate being easy and common.

In several of the Ultratindian languages the African root for 2 in *r*, which enters both into the Dravidian and Mon-Anam systems, re-appears in higher numbers, as in African languages, a consequence of the ultimate binary basis. Rae Bongzu *rae*, Kuki is 8, in Chong it is 10, in Lau and Kumbhojan it is 100. (*roa*, *roe* K., *noi*, *hoe* L.) In other languages also it is used for 10. It appears in the Anam *mare*, Naga *tarā*, *tarah*, *thelu*, *kerr*, *kurr*, and Kuni *ho-ro* 10. With these compare the Burmese *tar*, *taya*, Karen *teraya*, Mikir *phar* 100. [The Sincowry *lam* 10, *Ka dam*, Anam *tam*, Mon *tham*, 100, appear to be formed from 5, *nam*, *lam*, *ram*, or from 8, *tam*, Anam, Ku.] As a connection between 8 and 10 or 100 exists in the case of *rai*, and is also remarked in the Tibetan and Chinese systems, the latter is probably the true

derivation. In the Namsang Naga, which uses the Chinese *chi* for 10, the ancient term is retained in 20 and the higher terms. 20 *rukngi* (1), 2), 30 *rukram* (10, 3). The *ak* is probably a connective like *ha* in the Khari *tarahonet*, 12, (10, 2), *tarabasan*, 13, (10, 3). In Khari and Angami *ra* occurs, following the lower number, Khari, 30, *samrah*, (3, 10), 40, *lrah*, (4, 10); Angami, 30, *seri*, (3, 10, in this dialect *sa* becomes *she*), 40 *lhida*, 50 *rhipengu* (10, 5). Mozome-Angami, 30 *surr*, 40 *lhida*, 50 *ripangu*. *Ra* also enters into the terms for 100 in some of the Naga dialects,—*rakru* Nagauung, *ruhrab* Khari, contracted to *kra*, *kra* in Angami and M. Angami. Some of the Yuma dialects also preserve it. *Bongju*, 20 *rubu-kar* (10, 2, the term for 2 being Mon-Anam also.) The Aboir-Miri has no trace of this term, but in Dophla it maintains its place throughout, 10 *rang*, 11 *rang-la-akin* (10 and 1) &c., 20 *rang-chang*. In Bodo, Dhimal and the Nipal languages I do not remark any trace of it. In Garo it occurs in the Mikir form for 20, *rung*. The Arianised Gangetic languages possibly retain it in the numbers between 10 and 20, e. g. 11 *ega-ra*, 12 *ba-ra* (in which *ba* may be Mon-Anam*) 13 *te-ra* &c. With these comp. the Sanskrit *eka-dashan*, *dwa-dashan*, *trayo-dashan*.

In several of the Kumi dialects the Mon and Kasia *sun*, *san*, 5, re-appears as 10,—Koki, *sun-ka*, *sun-ka*; Car Nicobar, *sun*; Bongju *tswar-kar*; Kyau, *teluom*; so Kumi, 100, *teluun wai-ro*.

In most of the Naga dialects 20 appears to have partially retained a Mon-Anam character. The terms are *ma-chi*, *ma-tsu*, *tha*, *tsa*, *cha*, *nakhi*, *me-ku*, *ma-ku*, in which, *cha*, *tha* &c. are the Tibetan "ten." In Namsang *cha* is also used for 100, *cha-the*. In the terms for 20, *ma* must stand for "two," that is, it is the Mon-Anam *na*, *ba* &c., 2. This is confirmed by the Mon *ba-chi*, Chong *bar-se*, Ka *bar-chit*, all signifying "two-ten." The Kambojan *ma-pai* is a similar term, but the use of *pai* for 10 is anomalous in it be the Kamb. *bai*, 3. It may be connected with *rai*, *hai*, Mon-Anam flexives of 2, but it is more likely to be a form of "one," Kasia *wai*. It is very remarkable that the same term appears to be preserved in the Murni 10, *cha-wai* (one-ten), and in the thence derived Sanwar 100, *swai-ka* (*hundred-one*.) In Kumi it occurs in *teluun wai-ro*, 100, in which *teluun* and *ro* both represent 10; from 40 to 90, *wai* is used for 10, and it is probably a contraction of *wai*. In some of the Murni numbers *to-kol* is used for 20 or "score." It is evidently connected with the Naga and Mon-Anam *ma-ku*, *ba-chi* &c. It may be inferred from this that the Iepcha and Lhopa *kha*, *khe*, "score" are fragments of similar terms, the prefix for "ten" having come to represent "twenty," like the corresponding *cha* &c. in some of the Naga dialects. The anomalous *san*, 20, of the northern Lau dialects (Lau, Ahom &c.) is probably a variation of the same Naga form. The purer Siamese retains the Chinese term *yo sip* (2, 10).

In four of the Naga dialects the term for 10 is *ban*, *pan*, which is probably from *banga*, *pangu* &c. (Kumi *pang*, Mikir *phong*).† The Kasia

* Bopp derives *ba* from the Arian *dwa*, and *ra*, *re* from the Arian *dasha*, *deka* (Comp. Gram § 312). The contraction of *dasha* into *da* is not improbable, and the conversion of *da* into *ra* would be easy.

† It may be connected with the Chinese *wan* or *ban*, "ten thousand", originally the highest simple term of their system, and which the Manchus have appropriated to 1,000 *itiuan*.

shi-pon appends the same word to the Chinese shi. The Limbu thibong appears to be directly derived from the Kasia term. In both systems bong &c., represent 10 in the higher numbers, 20 Kasia ac phoo (2. 10), Lamb ai bong; 30 K lai pon, L. sun bong. Kasia continues to use pon in the terms above 3, but Limbu discards it and adopts zip which is the Kiranti kip, 10, the Mikir variety of the Chinese chip. Kumi has also among in 20 and the higher numbers.

B.

COMPARATIVE VOCABULARY OF MISCELLANEOUS WORDS OF THE MON-ANAM FORMATION.

In the following list of Mon-Anam words I include all that are found in the Ultratrainian languages that remain prepositional. But a considerable number are Chinese more than Ultratrainian, and many do not belong to any glossarial formation that has pre-dominated in Ultratrainia. Several have also been derived by the Mon-Anam from the Tibero-Ultratrainian vocabularies. On the other hand, many words, widely diffused in the N. Ultratrainian and Gangetic languages, that do not appear in this list, probably belonged originally to the prepositional formation, and have been lost in the progress of those changes to which all glossaries are subject.

1. Air.

a. An hoi ("wind" jo); Kol hoio, hove, hoyoh.

Ar. hawa; Mong. ahur; Tib. ahur ("wind"). Ahor asar, "wind"; Bengali swar; Burm. hong si w. *Af.*—Dumak. hahm, hahmo &c. w.; Dulla soneta w., Malagasi isonte, isonte w.; Malg.-Asones angine, aoge, angin, hangin &c. w. *Ason.*—Kyan ba-hoie, Pol. sau (emie, Mala.).

b. Kamh. akas; Manipuri masu, masi, ma hia, mactoi, nang-sat; Sunw. pha-se, Misch. bash. (Root probably *as, ash, hash, sa, sa si, shi, shi. se* &c.)

Jap. kase; Fin. gaiso, aiseh; Persian, Turk. yosi, awasy; Ug. wes-see; Mong. Tib. asur, (Ahor asar); Samoid. masi, bursi, barshi &c. w. The Ultratrain-Himalayan root is evidently *as, sa, &c.* and identical with *a.*, but in some of the above Mid-Asian terms *si* &c. may be merely the def. postfixed to other wide spread roots. It occurs in numerous other Asiatic and African terms, combined with formatives or with other roots. It appears to be radically identical with the preceding term, (*a.*). In the Kambojan form, the vowel of the pref. has been euphonically transposed, *ak-as* for *ka-as* or *ka-sa*. *Ason.*—Wugl. asa', Ende, Solor as. Pol. sau, (Bajo srus, Pagai rusa.)

c. Mon kya, kia (also "wind"); Nag. tikhe; Goud koeyo w. [*? Kol kyo*]. Comp. Drav.

Mong. kei w. (See Drav.). *Ason.*—(See Drav.)

d. Mon. bloei; (An. "Sly").

Sansk. rata, Beng. baas. Europ. ventos &c., Hind. bad, Bad. bar. Gar. pal; Ug. wire, wot, wet, Sam bar.shi &c.; Korea pavan, pharong Kameh. epulod &c. (Manipuri pharra &c.). *Af.*—Seh. mero. *Ason.*—("wind") Biousa bacua, Meri beraai, Celbes paire, pori, New Guinea. wot, Aust. porowa, mailo, boran, wiri-nguma, padru; Sabim. badi, Kag. padak (Drav. c., a)

e. Lau lom, Gare lam par (See T. U. lung &c.; Drav. b.)

2. *Ant.*

a. An. k'in, Kas. *ka dakin*, Singp. *gagin*.

(? Singhat *ka nio*); Ason — *Paraw*, k'ino, Ach. k'ino, Sumba kama-ula, Kisi. ugama, Timor kuva.

b. Lau mo, mut, puak; Kamb. *sar-moit*; Mon. *sa-mot*, *kha mwot*; Dhim *aha mui*, Kol mui, mae; New. imo; Male pök; Ur. pon (Lau).

(? Sinh *makoro*); Ason. — Mol, Indon samut (Mon), Binua p s, i, os.

3. *Arrow.*

a. An. ten, Ka tong, Manip. than, the; Nag. *la'chan*, *la'ang*, *lusang*, *lahan*; Shao luk-soi, Mik. thol, Khyän thar, Kuro, tai; Lunou tong, Lepch. chong.

Yeneset tem, tum &c; Tungus. *sir-lan*, Sam. *changa*, Mong. *samu*, *cho-mu*, *sumu*; Chin. *ten chi*, Sam. *tise*; Beng. Hind. *tic* (Manip. *tel*). [The roots in *k* are probably identical with those in *t*, *ch*, *s*. Chin. *chi an*, *chian*, &c; Lau kong; Sinh. *kan* (arrow; Ason *kaur*, (arr); Day *knei*, (arr.); Mon *knya*, *kon*, *tanga*). The same root is used for "bow" in many languages, — Lau *tano*, *thano*, Ka tongah, Kamb. *ting*, Mon *tanga*, *tangah* *krang*, Singp. *ndan*, Pali *tano*, Singh. *donoi*, Beng. Hind. *dhout*.] Ason — Bis *odong*, *odiong*, Bin. Mat. &c. *damak*, *dama*, Bin *lamak*, (but this form may be connected with the Semitic *rama*). Jav. *kandewa* (bow). The Malagasy *pama*, *tana* &c. has kept its ground in most of the Naga-Polynesian vocabularies.

b. Mon lay, leon, Kamb. *piruen* (See T. U.)

Ason. — Pagai *corou*.

c. Kas. *ka knam* (prob. a — *kam* from *kan*, with the initial nasalised).

4. *Bird.*

a. An. *chim*, Mon *sin ngat*, *kachim*, Kas. *ka sim*; Gond (Gawil) *sim*; Bilong *sisom*; Nic. *ihom* (? Kol *chene*, Kr. *chongwa*, Sonw. *chiva*, Bodo-don-chen) [See T. U.]

Ch. *cho*, *chou*; Mong. *shochu*, *shobon*, *shobo* &c. Sam. *teshunda*, *chiacha*, Korik *atschel*, Aino *tschüker*, Arm. *urshon*, Sansk. *po chi*. Af — Saumali *shim-bir*, Galla *sim-bira* &c. Ason. — Biau *chim*; (? Mad *acham*).

b. Kamb. *sat*; (prob. T. U. *sa* &c, with a Kamb. consonantal final)

c. Lau *nok*, *nuk*, *naut*, Burm. *oghak*, *nget*, Kapwi *nghet*, Mirmi *naza*, Urao *orak*. In Abor Miri it is preserved in *rok pi* "bird-egg", both word being Vindyan.

E. *Cine*. *angko*, *aako*, *anako*, *waencho*, *aka-onoch*, *anakiwi*; Sansk. *beyazgo*, *bihanga*; [Malayu &c. *anggas*, *angkas*], Af — *uko*, Galla ("bird"). Ason. — Nih-Pol. (common), *manak*, *manu*, *manuko* ("ape", *woenuko*) &c., N. Austral. *aluk*, *lukatuk*, &c. (? Galla). The great prevalence of this term in the Indo-Pacific vocabularies and the prefix *ma*, render it probable that it existed in the Naga Manipuri and allied dialects before it was displaced by the Tibetan *vo*, *sa* &c.

[It is not probable that a root for "bird" is peculiar on the Aso-European Continent to the E. Caucasian group on the one side, and to Lau and a few other adjacent languages on the other. Is it evidently connected with the almost universal root for "duck" Tungus. *uki*, Mong. *nugusun*, *nogò su*, Turk. *arak* (Urao, *orak* "bird") *urdek*, *urtek* &c., Pashta *orlek*, Ug. *batta*, *wase*, *wasig*, &c. (*t*, *s* for *l*, *r*, *n*); E. Afr. *birak*; Ind — *bank*, *bank* &c.; Arab *baro*; Siam. *patò*; Ladonee, *itek*, *ite*, *itik*, *iti* &c. (Gond, *ite*, "bird"); Engl. *duck* &c. &c.]

5. *Blood*

a. An. man; ? Kol myun, [? Ugr. male, wuorak, wyar, urr, ver &c. K. diak in I-yo-mul, Korea ko-mor; Afr. Shang. mohba.]

Ason — Simang, Rima, maham, mahom [? Znd. wohane]. Kis. meang (Kol). Torres St. mam; Austral komura (Korea.)

b. An. tiet (Chinese)

c. K. chiam, Mon chim, Kar. thwi, Yuma ti, thwe, si, thi, hi, i, sai, chei, K. ang tazai, Jili lasai, Garo chi, Dhim. hiki, Deor. Ch. chui, Bo l. chei, Tibet. shui, New. hi, Limb. mekhi, Lepch vi, Chip. wi, Changl vi, Sunw. usi; Mag. hyu, Kir. hau, ? Male kesu.

Chin. chiué, hint. hue, he', Japan tschi, zi, Aino. kin; Tungus. sonyi, shoma, Turk. chan, kan, you &c. Circass. cha, Muj. zi poh; Arm. anvon, Lat. sanguis. Afr. — Malagasi razana, zanaka &c. Ason — Simang cheong, Bin. za, zais.

d. Lau leut, lut. let.

Kashm., Sin. di, rat, Tamil ratam &c., Sansk. rudira, Drav. udiram return. Ason — Sunda let, N. Austral. elod.

e. Kas. suam (?a Kol; but probably sam (c.) with the initial nasalised.)

6. *Boat*.

a. An. ding, chi liang, Kas. ling (See T. U. and Drav.)

b. K. tok, tup, tumit, Choong dok, Ka duak (T. U. and Drav. tha, o. a, down &c. with a Kamb. consonantal final).

Ason — haruk Kayan [Naga sarang, Abor hulung]; bid k Bajo, Pasir.

c. M. kleng, galon, Naga lung, long &c. (See T. U.). Lung is connected with the slender Burman form lha.

d. L. reua, ru, heu, hu (See T. U., Mishmi, rua &c.)

7. *Bone*.

a. An. shung, chiang. K. cha'ang, Mon. tsu, Deor Ch. pichen, Kas. shing, K. ang, Ur. Male kochal, Kirant. sui-ba, Limb. sa'-et.

Turk. s. on a, sycnjok, sunk, suik &c.; Jap. hone; Iran. os, asthi, &c.

Ason — in. jiti's, Bin. jahang (Kol), Tobi chil (Male, Ur.). Pol. svi, lui, sivi.

b. Lau dak, nuk, kaduk, (Manip. arukhai, Tib. rako, Lhop. rutok &c.)

Cauc. rekka, ratla, rotli &c.

8. *Buffaloe*.

a. An. klang-nuk, Mon. priang, pyen. Mikir chelong, jalong (Chobu namok, "cow"). Changlo brung; Kas. s. ureh, Naga le, teli; Manip. lai, hoi, woi-hoi; saloi, alui, aghoi, galui, saoi, ra-oi (See Drav.); Kyo chu-lawe

Ason — bin. Mangk. Vug. tidong, Mandh. Dor. terong, Ilok. nuang.

b. Kamb. krabo, larbu, kar-lai, Ka kar-pa. Clong. L., khrai, khwai, Bu m kyue, Kol kara, kera (Drav. The final bu, bo is probably the wide spread word for "ox" &c., which, in the Maniquari and Yuma dialects is also used in compounds e.g. (w-i-rhoi "buffaloe", woi-ton "cut").

Ason. — Iudon, krabui, kripue, karabao, horobau, karbau, kabu, kubu, kebau, kibo &c.

9. Cat.

a. An. *m'iau*, L. *miau*, *meau*, Kas. *miau*, Garo *myou* [See T. U.]

b. K. *china* [Manip. See T. U.]

c. M. *pa-khwai* (See Drav.)

Korea, *koi*; A.—Kwíl. *paka*.

10. Cow.

a. An. *bo*, *bon*; Lau *won* (T. U. *ba*, *nwa* &c.; the amplified vowel is found in the Songpu *woi* prefixed to other words for "cow", "buffaloe" and "elephant" [See Buffaloe].

b. An. *sung-krau*, Mon *kleau*, Kar. *klo*.

Drav. *akalu*, Cauc. *aka*, Hind. *goru*; Tungus. *hokor*, *akur* &c. Fin. *sagar*, *iskar* &c. Arab. *bagar*.

c. K. *ku*, L. *ngua*, *ngo*, *ngoa*, hu, Mon. *nua*, Burm. *ngi*. Blat. *ngo*, Jili *tanga*. The last term may be connected with some names for the "buffaloe" in adjacent languages,—Naga *chang*, *tyang*, Dhim. *dia*. The Mon *nua* is evidently the same as the Burman and Karen *nwa*, which may be the T. U. *wa*. The Kambojan *ku* appears to be nearer the Chinese (*gu*) or Indian (*gó*, *gao* &c.) forms of the wide spread guttural root.

Ch. *ngui*, Turk. *ona*, *ina*, *inak*, Magy. *uno*.

d. M. *kwon hban*, Kar. *wa bing*, Rakh. *min*, Naga *man* (See T. U.)

e. Kas. *masoi*, Naga *masei*, Garo. *mashu*, Bodo *mashujo*, Tami. *pasu*.

Ugr. *mus* &c. Latin *bos* (See Drav. *b*).

11. Crow.

a. An. *kon-kwa*; L. *ka*, *kawa*; Dhim. *Gond*, Kir. *Murmi kawa*; Limb. *ahwa*; Mund. *Biumij kova*

Ka is a com. Drav., Tib., Asiatic and Asonesian root. Sindhi *kaw*, Kash. *kav*. Ason.—Bat. *Bug, gawo*, Tojo *gawap*, Parigi. *kau*, Pol. *kaon*, (Indon. *kuwau*, *kuau*, "bird", "pheasant" &c.)

12. Day.

[See "Sun"].

13. Dog.

a. An., Ka, *Chong cho*; Kas. *hsen*, *hasen*; Naga *su*, hu, *bi*, *tasu*, *thesu*, *az*; Manip. *thu*, *thi*, *shi*, *si*; Mik. *hi*; Mrang *ichai*; Deor. *Ch. shi*; Bod. *choi ma*, *chi ma*, *sei ma*; Lepch. *kazeu*, Kir. *kochu*, New. *khicha*, Mag. *chhyu*, Sunw. *kuchung*.

Cauc. *choi*, *sohy*, *huc*, *he*, *kochi*, *chwa*, *koy*, *chbah*; Sansk. *shoa*, *shoan*, Pali *sa*, Arm. *shun*, Kashm. *han*, Germ. *hund*, Fr. *chien* &c. &c. Af.—Dart. *asa*, Pol. *hyen*. Ason.—Bin. *cho*, *chu*, *chor*; Indon. (com., Achin to Iloko) *asu*, *aso* (Naga pref.); *acho* Kis., *aho*, Solor. The Baliguini *kiching*, Pont. *hison*, Kand. *haso*, Komr. *hujo* are more immediately allied to the Kasi *Kamuk*, Himalayan and Kasia forms. In Malay and some other languages *kuching* is applied to the "cat" (comp. Balig. *kiching*, Sunw. *kuchung* "dog"), while the root takes a different prefix when applied to the dog,—*anjing*; Mairus. *entsing*. In the Sassak *basong*, Koti *basa*, the root takes another of the prefixes common to Ultradian and Asonesian languages.

b. Kamb. *chake*, *ekik* (prob. T. U., *eki* Ab., *khwe* Burm., *kai* Garo. &c. &c.; but the syllable I have marked as a prefix may be the root *a*.)

c. Mon kla, kla-au, An. kau (kla is also "tiger" in Mon., Kambojan, Kasia and Kol). See also Coa b. It may have been applied as a general term for quadrupeds like *wol*. In Burman it is sometimes so used.

Ugr. koira &c; Cauc. kari; Arab. gelip; Tigre kalbe; Woloff kaille. Ason.—Pusir kolo; Viti kofi; Pol. kuli, guli; Taraw. kiri.

d. Lau mu, Au. muong, Car Nic. am.

Sam. men, bang, ban &c.; Ugr. pou, umba, amp &c. Cauc. pahu po, pah'; Af.—Suah. mbua, Makua, ampuah; Malag. ambua. Ason.—But. abu; Fani apang; Torres St. amai, oma; Taraw mog. (An.)

14. Ear.

a. An. tai, tei; M. ha twon; Dhim. uha tong.

Tungus. shen, shua. The same nasal form of the root is found in other Falar languages, in Semitic and in Tibetan. Af.—Galla athun, Danak. aite. Ason.—Bin. tang, dang; Sim. anting; Butan titiuan; Austr. (Wirad.) uta.

b. K. trichi-it.

c. L. ha; Deor. Ch. ya-ku; Kar. naku, Bod. kho-na, Limbu nekho.

Sam. ku, ko; Ost. ko; Korea kui; Ugrian kama &c.; Drav. kemi, kavi &c. [See Drav.]

d. Kas. skor; S. Tangk. nakor; Garo. nachor; Mishmi. nukru.

Yenesei kologan &c, Turk. kuluk, khat &c., Fin. koria, Sansk. karna. Georg. kuri. Af.—Galla gura, guru; Saum. deyyar. Ason.—Torres St. Aust. kara, kare, guri, kowra, gerip, karusa. Aru takar. [See Drav.]

15. Earth.

a. An. det; L. prathet; K. deiye; Mon. te, tse; Kas., ha han-len; Kyen teit; Simang te'; Kol. ot, ote, wathe; Gond. otai; Marum. nthai; Songpu handi (Kas.); Koreng. hudi.

Chin. tho, tei &c; Aino tui; Korea ta-ti.

b. L. din, nin, phen din. (? a. from the forms in di, or? Drav. nil, nel.)

c. L. mauang; Abor. among.

Ugr. muu, ma, myo, mag, &c. Cauc. mau.

16. Egg.

a. An. krung; L. khrai, khai; Manip. yerum, haru; Kas. ha pa-leng; Magar rhu; Silong kloen;? Mule kir-pan.

Korea ar, ol. Ason.—Bauer. kurau; Tojo krau (but? from tara Kaud, tulu, Komar. atali Malagasi); Pol. kali (? N. Ultr. koi, As &c.)

b. An. ung (N. Ultr., Chinese; Sansk. dim.)

c. K. pang, M. kupa, Koreng pabun, Marmi, phom, Gurung, plung, Sunw. baphu, Abor-Mir, apu, apin, rok-pi, ("bird-egg"), Aka papuk, Dophla pupu, Mal. kirpan, Kol. pita, pita, bi, bifi. The Kol terms are from the Dravidian *vita* &c. "seed", the root *vi*, *bi*, being widely spread.—*biachi*, *biakan*, *vibi*, *bin* &c. The primary meaning seems to have been "stone".—Samoide pi, pui, pai &c., Bislaryo owi, Kamchat. uwatschi, *uwatin*, *wecher*, Tungus. weche (comp. *biji*, *biuji* &c. "see"), Chuk. ni-gum, Koriak wu-gum, and the Indo-European, African and Australian *pu-thar*, *ru-tu* *ba-kir*, &c. &c. The Abor-miri pi, pin, pu, appear, like rok "owl" in rok-pi [see "Bird"] to be derived from the Dravidian, which has also the form *mu-tu* (S. Drav.) The other Gangeo-Ultratolian forms appear, in their turn, to be the modified Abor-Dophla pu, with guttural and nasal finals,—puk, pun, bum, pung.

Lat. ovum, Hind. baiza; Arab. bilk. *Ason*.—Tarawa bui, Pol foi.

17. Elephant.

a. An. woi; Songpu woi-poung (woi in songpu. is also a prefix in the names for "cow" and "buffalo") Champ. plo-bi, Luh. ma-vu, N. Tangk ma-plu, Singph. moq-wi, Kyan. nwi, mui, Bodo moi-gedet. [The term is evidently a modification of that for "cow", nwa, wo, pai &c. used also generically for quadrupeds in many of the Ultraiidian languages]

b. K. tamui, damre, Ka rudi, Chang kanai, Kas. inguar, Dhimal naria. Tam, dam may be connected with the Tibeto-Ul. taug, lam and the ba-ram of the Malay Peninsula (Binua, Malay), or it may be merely the def. pref. which sometimes takes a final in euphonicaly. The rai, nai, re, is Drav. —raia, Singhal, ana, Tamil &c. It is also found in Burm. aue, ne, nin. Kyan ni, Kam. kui. The Tamil kalira is probably from the Sansk. karin.

c. Mon sheu, tsin, chuein; Lau tsang, chang, tyang (T. U. and Chinese.)

18. Eye.

a. A., Ka, Cheng mat, Mon mot, pamot, mwot; Kas. ka kamat; T. U. mik &c., Maup. mit, amak &c., Garo makar, makron; Bod. mogon, Kiranti mak, Kol. met, med, Rakh. myat-si

Chiu. mok, ma' (=mak), bak, mu. [See Drav.] *Ason*.—The broad form which appears to have prevailed in the Mon-Anam languages, and to have been disseminated eastward (Garo, Kiranti), has a very wide range in Asonesia. In the Nankowry *alamat* and in the Simang and Binua mat, met, it preserves the Ultraiidian monosyllabic form, but in the harmonie insular languages the common form is mata (Nias to Polynesia). Variations similar to the Continental also occur, e. g. baka Tilanj, maka Hawaii.

b. K. penek or panek, panek, Laos paned; Nag.—Tengs tenyk, Khar. tenik, Nag. tenok; Abor, Aka nyek, Doph. nyuk. These forms are evidently variations of the slender form of the Chin.—Tib.—Ult. root, a (Tib. mik, Mikir mek, Kol. met, med, Kyan meet).

c. Siamese netr.

Pali, Bengali netra, Sansk. netram, netro; Af.—Tumali ngot. These forms, as well as auk, ak, ek, kan &c. appear to be referable, with a. and b., to one primary root. The immediate derivation or connection is obscure.

19. Father.

a. A. thei, sha, cha, K. ta, Bin. zaza, Car. Nic. chew. (Drav. o-chcham).

Chin. tia; Sam. esya, eche, ese. Jap. Ugr. Turk. &c. have similar terms, and it is also Semitic, as Gara, (comp. also Turk.) In the Sansk. pi-ta, (pi-ter) &c., ma-ta, and the corresponding pa-ter, ma-ter, fa-ther, mo-ther &c., ta &c. may be this root, unless it is merely a definitive. The combination is -eythia &c., bate Perm. (adate Amharic), abeda Sam. apatsch Kamsch. In the pure dental form, or which the sibilant is simply a variation, it is almost universally distributed [See Drav.]; The Turkish and Ugrian atei appears to be the closest of the numerous Mid.-Asian forms to the Anam. *Ason*.—Bis. tatei, totai. [These are Ugrian forms, near Wolga; atei of Wolga and Turkish is a contraction of this. The full reduplicated form is also found the Fin, tasta,

tato, and in the Iranian tata, dada, dad &c.]. Rotum. ntha, Pol. tua, *maua* (also "mad", "chief" &c. in many Nilo-Polynesian vocabularies). Tama, tuama, sama, yama, occurs in Borneo, Celebesian and Polynesian vocabularies. The Mille jina, Trusan tiba, appears to be a variation of it.

b. An pu, Kamb apuk, Champa pak, (Ka. bap). M. bah. kba, Lau po, Kas *uhapa*, (T. U., but also universally prevalent. The Acom and Lau pu, po, may be ultimately from the Chinese fu, hu, po, but they seem to be more immediately derived from the Naga-Manipuri forms.)

20. Fire.

a. A. lua, lia, K. *pilung*, *plung*, Chong *pleu*.

Ugr. tuli, tol, tul, ulc, ulga; Pashta or. *Ason*—Erub ura, Rotum. re. Bunerati *h-h-kapi* (a double word); Giorout. tola, Kawi, Krom. lotu, Viti ngatu, Niha alita; Magind. klain, Ila *kalayo*. Bah. jini, Sumba jala. North Australian ("hot") ajalli, ojalli, ojena. The Bali appears to be a modification of the Arian agni, agun, &c., and the Sumba and Australian or the Arian jua, cal, chal, &c, which is also Ugrian, zhar, shal-jim &c.

b. M. ka-moiot, ka-met, ta-mat, ta-mot; Car. Nic. tomoi-chu. This term is probably of T. U. origin through the Kumi ma-i, ma-it (the root, common to the T. U. and Chinese, being me, mi, to, fua &c.) Swahili has moto and Malagasi mote. The Bodo wat appears to be a variation of the Mon mat.

c. L. tai, Manip. Dialects (throughout) mai. This appears to be also of Kumi origin, ma-i. [For the Asiatic and African affinities see T. U.] The allied Asonesian terms appear partly to follow the Malagasi (afu, ate) and partly the Manipuri and Kumi. The principal are afu, ate, ape, api, amu, apoi, apu, moi. As the Kumi and Mon both retain the T. U. m, and forms in m are almost absent in Asonesia, m i Masid, from poi, foi, is an exception; it is probable that the Malagasi form was the origin of all the allied Asonesian ones, and that the Ultraiidian influence on the term was merely phonetic, producing the amplification of the final vowel.

d. Kas. dior. This term is peculiar, unless it is a variation of the Kol sing, sing-il (Fire, Sun, Day).

21. Fish.

a. A. kha, M., Car. Nic., Binua ka; Kas *ka dokho*, Mik. ok, Manip. kha, khai, khi, Misa ta, Kol haku (T. U. nga &c.). *Ason*. Niha—Poi (com) ika, ikan.

b. K. traan, trei, trai, Ka tre (? Marmi tar-nya); *b*, *c* and *d* may all have a common root, a, lau &c.

c. Chong mel (Drav. mlu).

d. L. pha, pa.

Turk. pa-o, balok &c., Jap. awo, iwo. *Af.*—Mak. apa, Malag. fa, pia, Dart. fua. *A. a*—Ind. n. ewa, ibah, ibang, be, bei, unpa, wapi, lau; Pol. maiolo, Boni bilei, Dore bille.

22. Flower.

a. A. hua (Ch. hua)

b. K. pika, M. kao, koug.

c. L. dok-mai, dok, bah. mok, Tib. Him. men-dok;

d. Kas. sinain (sin is probably a prefixed definitive.)

23 Foot.

a. A chen, kang-shun, K ehong, M. chang, Kar khong, Mrung yakong, Naga ta-thang, ta-tsung, Bodo atheng, Doingsak teng, Lepcha ding-liak Lau tin Sim chen [Tib. kang].

Drav. kal, Chin. kha. *Ason*—Tobi chem. The Lau tin may be connected with the Dravirian adi, Saumali adia, Indonesian and Australian dena, dina, tina &c.

b. Kas kujat, (prob. Drav kazhal &c.)

Ason.—Kand. kachia' (= kachak), Pont. kaja, Kayan kasa [See Drav. *a.*]

The root common to *a* and *b*, ka, cha &c. has a very wide range, See Tib., Drav.

24 Goat.

a. A. ye (Chin yoo).

b. K. pope, L. pe. M. Ka bai, Burm. mai, Singph. bai-mau, Naga na-bang, Abor sha-ben, Manip. D. ha-men, Mikir be, bi, Manip. D. me, mi, hami, amu.

Af—Shang. mea, Egypt. ba. *Ason*.—Indon. ambe, imbe, be, beba, bembe, biui, kabimbi, kumbing &c.

c. Kas. ka blang, Garo purun, Bodo bar-ma, Manip. D. klang, (1 Tib. ra, Semitic aron, Africa illa &c.)

25 Hair.

a. A. tau', Kar. thu (see *c*)

Chin. thau mo &c. (thau is "head"),

b. A. long, Kyen lu.

Aina ruh, Arm. law. *Ason*.—Pagai oli, Ut. uiri, Tar. ira, Pol. lau, ulu (Indon. &c. ulu, "head"); Wirad. uran; Kayang inang

c. K. sok, M. sok, thwot; Binua sok. Probably from the Ultramontane-Himalayan song, sam &c. and Tib. sha, which again are connected with the Mongol usun, Turkish asim. *Ason*.—Tobi chim.

d. L. phom, phruu, Tib. pu (a wide spread root)

e. Kas. shniu. It sh is part of the root, it is probably a modification of the F. U. ethwon. thung, sam &c. If the sibilant is a prefix, the root may be connected with the Naga min, Garo haman, Bodo khomon.

26 Hand.

a. A. tai Ka dei, M. tai, tway, Kas. ka tti, Bod. ekhai, Manip. D. akhui, kuit, kheut, Nag tekha, tekhat, dok, Bongju kut, Kyan kuot, Chejong kut-pa, Sunw gor (Manip.) Mith. got, gua, Dhim. khur, Kol. thi, tui, Mishmi owa, Gond kaik, Drav. kai,

Ug. ian kat, ket, kez, kata, kade, Turk. kol, kal, chol, Mong. gar, chai, Tungus. gula, Sansk. it gara, Cauc. kuor, Sindhi kur; Jap. te, Sam. oda, Ugr. oda, Kashmir. atba, Gura. it, Tigre id; *Ason*—bin. ti, thi (Kas. Kol) kokot, kokut (Yuma, Manipuri), Meri ta'akin, Viti thaka Erubing (Naga tekha, dak.)

b. L. mu; Kir. mon, Gur moi.

Ason.—Sas. ama, Samb. Kis ima, Peel R. ma, Trus. bai, pai.

27 Head.

a. A. du, dau (Chin. tau), Ka tuwi (? Chong tos), L. ru, ho, kaa, Yuma lu, hlu, Manipuri D. lu, olu (The Bodo koro, khuro, Mishmi

nkoro, Gur. kra, appears to be connected with the Kashmiri kala "head", and Tibetan kra, "hair". The Simang kala is more likely to be a contraction of the Malay kapala).

Af.—Fazog. Kana alo, Agau our, Malagasi loha, lua, [Singhalese olua.] *Ason*—Niha—Pol. (com.) ulu.

b. K. kabal (Sansk. kapala.)

c. M. kadap, ka-touk, Silong atak (T. U.)

d. Kus. ka kli or kli (? li, a modification of la a.; ? Dhim. puring = pu-ring.)

Ason.—Aru guli.

28 Hog.

a. A. heu, hea (? from lok, Manip.; ? Bodo yoma, Dhim. paya.)

b. K. chrok, cheruk, Ka chur, Chong charuk, Mon klut, kaleik; If the Kambojan forms are distinct from the Mon, they are probably from the Pali sukra by inversion (Comp. also the Pashtu sarkaza; *Ason*—Jav. cheleng, Viti. sara).

c. L. mu (? Bod. yoma), Lepch. mon, Sunw. po, Singphu wa. (Probably a contraction of the T. U. wak, pak, vak &c.)

d. Kus. suiang.

29 Horn.

a. A. sang, sing, Pi. suning (? Kar. chu-nong) Kir. usanga, Indian sing, shinga &c. (Sansk. shringa.)

Ason—Kawi songo, Kr. singat, Bis. sungai.

b. M. kreang, greang, Kas. ka-reng (T. U.)

c. L. kha, Burm. khyo, Nag. po-khyo, Aka kung, New ue-kz (Chinese ko, &c.)

30 Horse.

a. A. ngua, nya, Bodo nan, na; Dhim. onhya, Lepch. Lunb. on; Ugr. lo, lu &c. *Af.* Agau lu.

b. A. ma (Chinese.)

c. K. sa, Kar. kase, kthe, Kyen tsa, Kyo sha, Kumi kishi.

Turk. at, ut, Yenes. kut, kus.

d. M. kyeh, kya; Burm. kre, krai, Kas. kalai, Bod. korai (Ind. ghora &c.)

31 House.

a. A. na, ya, dang, Bod. na, Garo nak, Tibet. nang; Kaa. ka ting Kuki teng, Gur. tin, Manip. shin, shim &c. [See T. U.]

b. K. petah, Singp. nta, Dhim. chu (? n.)

c. M. hien, he, L. reau, heun, ren; Lar. hi, Mish. hon, Nag. hum, ham (T. U.)

32 Iron.

a. A. sat (probably from the Chinese thiat.)

b. K. dik, dek, L. lik, lek.

Chinese thi' (= thick), thiat &c., het, apan tets; Semitic hadid; *Ason*.—Kayan titi, Solor olokh.

c. Ka mam, Chep. Kir. phalum, Vindy. merhan, merhad &c.

Ason—Ara emom, Cer muma, moira, Lobo mumumur [See Drav.] *d.* Chong rohong, (See Drav. This form may be from the Bengali and Hindi loha.)

e. M. pa-see, pathway, Burm. sei, Naga kache, katse (See T. U.)

Chin. thi, Korea soi, say, Sam. yeso *bese*, *basu*, Sansk. *ayas*, Germ. *eisen*, Lat. *æs* (T. U.) *Ason*.—Champa *basai*, Ach. *basuc*, Bis. *Pani puthao*, Magind. *putan*; Goront. *wol watai* [Champa *basai*], Tobi *pishu*, N. Cal. *pihisu*, Maori *maita* [Celebesan *watai*]. The prevalent Indonesian form is the curt *basi*, *bisi*, which is less close to the Mon than the preceding forms, and has thus the appearance of reverting to the Samoide form *bese* &c.

f. Kas. *umar* New. *na* (? Drav. with the pref. *n*).

33 Leaf.

a. A. *la*, M. *kana* (T. U.; Drav; Tib. *lah-wa*, Bod. *lai*).

b. K. *silok* (? T. U. a; Burm. *rwak*) Binua *loluk*.

Ason.—Solor *lolong* (Bin.) [*b* is evidently *a* with a nasal, passing into a guttural, terminal].

c. L. *bai*, *man*, *bou*; Nag. *am*, Kir. *ubawa*.

Ugr. *poi*, *wyba* &c., Japan *la*, Yeniseian, Yukahiri *yipang* &c. (*pa*, *ba*, enters into many other Asiatic terms). *Ason*.—Kis. *awan*, Tara-*wa* *ba*, Erub. *papeh*.

34 Light.

a. A. *rang sang*, L. *lung*, Burm. *long*, *len*, Bod. *shrang churang*, Garo *klong*, Nams. Naga *rangro* Muth., Jobok. *rangai* [See "Au", "Sky"].

Tur. *arak* [See "Air", "Sky"] *Ason*.—Indon. com. *lang tarang*, &c. Pol. *taa-rama*, *rama*, *lama*, *malama*, Oolo, Mille *marum*, (? Kayan *mala*).

b. K. *pla*, Gorum *hhla* Kir. *ulava* (? Drav. Vindy. *ayeli*, *bela*, &c.; probably the root *a* with-out the nasal terminal and with the labial prefix) *Ason*.—? Kayan *mala*, Kih. *balawa* (Kirant).

c. M. *papiya*; ? Abor. *piuang*, Kar. *kpa*.

Ason.—Niba *umi*; ? Paser *piniku*.

d. M. *kama*, L. *sawang*, Kumi *kuwang*, Manip. *wan*, Kapwi *ban*, Koring *ben*, Champ. *Tangk war* [See "Au", "Sky", "Sun"].

Ason.—Lamp. *wawa*, Mandh. *muwajah*, Goront. *mobawawu*.

e. Kas. *bashai*, Tangk. *she*, *shea*, Jili *thwe*, Singpho *ning'hoi*.

Ason.—Mal. Jav. *chaya*, *chahya*, Sum. *chabai*, Bin. *chahoy*, *chupa*.

35 Man.

a. A. *ngoe*, Kar. *knya*. (? *ni-nyan* Nams. Nag; *pano*, *ano*, "Son," Angam).

b. K. *prus* (Pali *burut*, Beng. *purush*, Chep. *pursi*; a wide spread root; Ugrian *weres*, *pursen*, &c. &c.).

c. M. *karu*, *kru*; Ka *kloe*, Chong *sam-long*, Kar. *pra*, *kloun*, Kar. *huplong*, Burm. *lu*, (Drav. *alu* &c.)

Chin. *lang*, also Scythico-Drav. and African. [See Drav.]

Ason.—(? Syd. *kure*, Maq. *kore*, Masid *garak*. These terms may be modifications of the Indonesian *laki* with the def. pref., but they have also African and Ugrian affinities; See *d*.)

d. L. *khon*, *kun* (generic)

Ugr. *kom*, *aiks*, *kuian*, *kuil* &c. (root *ku*, *ko*, *ka* probably), Sem. *kum* &c. Yukahir *kun-shi*. Af.—Eg. *Dal. Shang. ka*, Yoruba *okhon*, Ful. *kokor* Ser. *okori*, Bish. *gul-tuk*, Shang. *gun-za*, Agau *gul-wa*.

Ason.—Bin. *kan-chu*; Ach. *akam* "husband"; [Timor *atoni*; Pol. *kanaka*, *tagata*, *kane*, *tane*; Mal. &c. *jantan*. But these terms appear to

be derived from a distinct Ultratindian form,—*u-tanga* "husband" Mikir, *diang* "man" Dhim &c.; *uam* &c. Samitic, *wasan* Ugrian]

e. L. *pu-chai*; Kum. *ichian*; N. Tangk. *pass*, Kas. *pensa*, Silong *mera*; Bodo *hi shai* "husband"; Binua "husband" *kan chu*.

Ugr. *ch-i, cho, chuo*, Sam. *chast* [Aton *chaya*, Chukchi *juk*, Ugr. *anchuk*, Tib. *chek ton*, Tibbetk. *chagpa* "husband", Misch. *cheung-mi*, Changlo *sango* and other allied Gangetic-Ultratindian forms, Burm. *yaukya* &c. [connected with other wide spread forms in *s, j, y* and *t*]

Aton—Sulu *usog* (? Nias *ma chus Afr.*)

f. Kas. *man* (New. Kir. *muno, mana, &c. &c.*; a very wide spread root.)

36 Monkey.

a. A. *kib, khi*, Kol *gei*, ? *gar, kau-we* (see e.)

Chin. *kan*. Aton—Pang. *uke*, Sumba *kuki*, Kah. *baki*, Banj. *bakua*.

b. A. *wun* (See c, d, e.)

c. K. *sua*; Lumb. *sobah*, Lepch. *sabau*, Ahar. M. *sibeh, shibeh*; M. *ka nwa*, Nag. *veh*, Aka *labe*, Garo *kouwe*, Singph. *wac, we*, Jili *tawe*, (See Tib.)

Aton.—Tej. *eho*, Sul. Tag. *amo*, Magind. *ubul, uban*. (Anan *wun*.)

d. L. *ling* ("Man", *leng*), Kas. *shri*

Aton.—(? Baj. *siro*, Pn. *siyo* from Kas. *shri*.)

e. L. *wak*, Rath. *Kapwi myauk*, Burm. *myauk*, Lunke. *Kyen yang*. The *y* is probably a softening of *r*, in which case the original Burman form would be *mrak*, with which the Sunwar *moro*, Mishmi *samim* and Indonesian *brok* are evidently connected.

37 Moon.

a. A. *klang, blang*, L. *len, lun* (T. U.)

b. K. *pichan* (Pali. Manip. *kachang, &c.*)

c. K. *ke*, Chong *kang*, N. Tangk. *akha*.

Aton.—Tab. *makam*, Mong. *ugam*, Tar. *makainga*. Ch. *gus*, Ugr. *ike, kon* &c.

d. K. *kot*, Mon. *katu, kattan, katek*.

Ch. *god*.

e. L. *tawan* (? Tib. *dawa*), Kas. *hana* [See "Light," "Fire," "Sun."]

Aton.—? Batta *kanawan* (the Lau *uwan* with the prefix *ka*.)

38 Mother.

a. A. L. K. *me*, K. *mi*, Ka. *mai*, Kas. *ka kami*, M. *mi, mui*, Binua *muu ambui*, Sim. *ba-m*, (*li lo-m*) Burm. *ma, ama*. (Almost universal in different forms, *ma, ba* &c. The form in *a* is Naga *apu*, Manipuri D. *avu, ahu* &c.)

Aton.—S. l. *mui*, Mad. *ambo*, Baw. *imbo*, Mal. Jay. &c. *ibu*, Magind. *bahu*, Pal. *jai*.

b. K. *madi*, L. *manda, mada* (Pali *merda, mata*).

c. Chong *mung* ("tathel", *kung*) See a

39 Mountain.

a. A. *nui*, L. *loi, noi, doi, jai*, Mruog *lu*, (T. U.)

b. K. *pinang, pnam*, Ka. *manam*, Chong *nung*, Sinang *minum*, Kar. *koe lung*, Manip. *kalong* &c. (connected with a, See T. U.)

Aton.—? Mang. *unang*, ? Bis. *tal-nan*.

c. M. *tu*, Burm. *taung, tong*, Jili *salong*.

Turk. *tu*, *tau*, *dag* &c. (See T. U.)

Ason.—Pol. *tua*, R. *tum*, *thuang*.

U. L. *phu khao*, M. *kha* (Chin., Yenisei, Sam.)

40 Mouth.

a. A. *meag*, Ka *hoar*, M. *pan*, Manip. D. *mamun*, *chamun*, *mur* &c., Limb. *mura*, Lepch. *abong*; Naga *tehang*, Abor *napang*, Simang *ban*, Bes. *pang*.

Ason.—Lamp. Kamr. *hango*, Sumbu *ubana*, Seler *wawang*, Pol. *man-ga*, Maori *mangai*, N. Cal. *wangai*.

b. K. *ma*, Maram *maibu*, New. *mhatu*, Chep. *mothong* (root *su*, *thu* &c. See c.)

Ason.—Meri *matang*, Banj. *montong*, Bunerati. *Viti masu*.

c. L. *pak* (probably from *pang*, a.)

d. Chong. *raneng*, Blum. *alang*, Kumi *Phang*.

Ason.—Mille *langing*.

e. Kas. *ka shinur*, Nag. *tun*, Garo *hatong*, Kuki *taung*, Mirmi. *Gurung sung*.

Ugrian *san*, *shun* &c.

41 Mosquito.

a. A. *hang*, M. *pan*; Naga *mang-dong*, Lepch. *mang-kang*, Male *min-ko*.

Ch. *hang*, *mang*, *hun*.

b. A. *mui*, Asam *moh* (? from a.)

Ason.—Bunerati *wai*.

c. K. *mos*, Goud *mi-i*, Ur. *bhus-endi*, Kol *bhus-undi*, *pichu*, Ka-
ren *patso*, Binua *kamus*, New. *pati*.

Sansk *mashaka*, Bengali *mosha*, Lat *musca* &c. The Indonesian *agas* may be from the Hind. *magas*, and the latter may be an inversion of the Sansk. But the Tamil *kasu*, *kesuvu*, Malayal *kudu*, Polynesian *kutu*, Indonesian *kutu* ("louse"), throw doubt on this. (See Drav.)

d. L. *yang*, (probably from *sung* Abor &c.)

e. L. *phreng*, (? Aka *tarang*, Kumi *chang-rang* &c. T. U.)

42 Name.

(Not included in my Comp. Vocab.)

a. A. *ten*, Kas. *ka harteng*, ? Kol *nutum*.

b. L. *tsu*, *chu*, Naga *achu*, Manip. *kazyau*, *kazyau*.

43 Night.

a. A. *dem*, Lau (Ahom) *dam*, Binua *due*.

Turk. *ten*, *tin*, *tin* &c., Koriak *ten-kiti*; Tungus. *dol-honi* &c., Yenisei *thol*, Ugr. *oti*, *ut*, &c. *Ason*.—Sulu *daum*, Buner. *tiutu*; (? Jav. *dalu*, Meri *dalam*).

b. K. *juk*.

Ugr. *jig*, *jugum*, *ji*, *jot*, Yenesei *shig*, *sai*, &c., Mong. *chei*, *so* &c., Aino *asi*, Chin. *jit-am*, *jia*.

c. L. *khun*; Tib. *ghanmo* (T. U.)

d. Kas. *ka miet*, ? Manip. *men*, *mayo*, Male *make*.

Sam. *pan*, *pin*, *po*, &c.; Af. *Amb. mata*; *Ason*.—Kis. *matang*, Sav. *meda*, Jav. &c. *pitang*, *piting* &c.

44 Oil.

a. A dau, you; Manip. D than, Bod than, tau, Kumi atauk; Car. Nic tavie; Kar tho, itn.

Ason.—Samb tuga (Kumi); Pol kau, kahu (Bod., Manip.)

b. K pring (? Tib *Abra-mar*, Japan *abra*, Pol. *moli*.)

d. L nam, man (T U, — Tib *nam* &c.)

e. Kas: umpeni ang (? Pol *pau*)

45 Plantain.

a. A' Kong-tin:

Ch kung-chiau.

Ason.—Baw kintang, Mad Kidang, Binua kantuk.

b. A chui, i. kai, kae, klue, kluei If, as is probable, klue be the original form, it is connected with the T U and Indian,—*ngola*, *kala*, *kela* &c., (*kala* Beng).

Ason.—Binua kalo, Sumba klau, Pamp. galéani.

c. M. prat (Drav. Iran)

46 River.

a. A som, song, saung; Korang, shingeg, Marmi shiong.

Tib. tsang (See T U); Ason.—Ind-u com. (See T. U)

b. K tas-hi, Ka duk-tani, Chong tale, Manip. D. tulil, tula, tu, Car. Nic. tohil, Singph. talau.

Tark. dara, idel, od i, Yeniz. tam, tatang, Sam. to-a, to, Drav. tani.

c. K. peck, Rakhi mrik, mriet, Kyen lik, Suvv. lika.

Tark. elia, yelga, Sam. urga-bu, Fin. wirta, Tungus. bir. (The Scythic root is *el, ur* &c. "water" *ga, la w, b*, are definitives.) Af. Galla lega (Turk); Ason.—Pamp. ilug, Tag. ilog (Turk), Meri leko.

47 Salt.

a. A. moe, man, M bu, blo (Drav. upu &c.)

b. A yen (Chiu)

c. K. ambil, Kas. ka mluh; Kumi ma-lwo, pa-loi, Kar. hitla, Aka alla, Abor alo, Mishmi plali, Kol bulang

Hind. milh, Arab. mileh, Mahrah mailhut, Bish. miluk, Egypt. mch, Pashtu malga

d. L. kleua, kla. ka, keu, kem; probably lu, leua, (c) with the guttural pref.

48 Skin.

a. A. jia, ya, sha, Mleh. sha, Limb. saho, New, yu, Turm. thays, Ugr. sou, such.

b. K. sibek, (T. U. Kumi apak, Singph. mophik &c.)

c. L nang

Fin. nagka, nakke &c., Tungus. nanda.

d. Kar. ka snep, Garo ho-lop.

49 Sky.

a. A. bloei (M. "air"); Chong pleng; Mishmi brro, Car. Nic. furel. Ugr. pil, Turk. pielts (See "Air" d)

b. A. tang-tien, Khoib. thang-wan, Kapwi tang-bau, Nag. rang-tung, Abor. toong, Manip. D. tingem kazing &c., Gurung tuo

Ch. tien, Jap. ten, Mongol, Turk. tentyr, tanyr, tengri &c.,

- c. K. me', mek, A. miei, Burm. magh, mó, Kar. mukho, Murmimu, Gur. mun (Drav.)
 d. K. kor, Ka krem, Sim. kael.
 Sam. kailah, Kamch. kella Ason.—Solor Kelam.
 e. M. tudeah (?Gur. tundi)
 Ason.—? Parigi todoug (?aulong, "covering")
 f. L. fu, Lungke wan, Khoib. thung-wan, Kapwi tang-ban, Aka
 aupa. (Drav. For the Asonesian affinities see Drav.)

50 Snake

- a. A. ran, Lungke rul, M. sum-prum (T. U.)
 b. K. pos, Kas. ka basel (the ? is Mr. Robinson's); Sunw. buse
 (T. U.)
 c. M. thaon, sum-prum, Kir. pacham Mamp ham-pu, hom-pwi,
 hum-ur. (prum is a and T. U., prum Maring &c. &c.)
 d. L. ngu.

51 Star.

- a. A. ting-to, Naga pothi, lethi &c.
 Mong. mdo &c., Ugr. teti &c. Af.—Galla tawi; Asones.—tui.
 b. A. sau, Kar. sa, Khyeng shé.
 Ug. sou, Ch. ch'he, se &c. Ason.—Tobi aish (Khyong.)
 c. K. pikei; Burm. kre, kye, (T. U.)
 d. M. nang, hnong, nyoh, L. nan, lau, dau, burm. minong, ? New;
 ngu (See a.)
 Mong. odon
 e. Kas. aklar (? d. with the k pref., or from the Tib. kase, &c.)

52 Stone.

- a. A. da (T. U. do &c.)
 b. K. timo, tamu, Ka tamoc, Chong tamok, M. ha-mok, hha-mouk,
 Ason.—Pagai buku, Pamp bago, Pol maka, kumaka (Mon.)
 c. L. hin (probably from the Gangetico-Ukradiian terms in l, r,
 the Lau, like the Anam, sometimes converting r into h.)
 d. Kas. man, (? Naga, Manip. rung, aang &c.)

53 Sun.

- a. A. nhit, nhot, nyat (T. U.; Ason.—Hoko init.)
 b. K. tingoi, tangai, Ka. Ch tangai, M. mai tangwe, Korong
 tingnai mik, (i e Day's or Sky's Eye), Naga ting-lu (see "sky", b.)
 c. L. wan, ban, Naga wang-hi (See "sky" f)

54 Tiger.

- a. A. ho (Chin.)
 b. A. ongkop?
 c. K. kila, M. kla, kyu, Burm. kya, Kas. a kla, Dhira khana, Kol
 kula; Changlo kaila
 d. Ka dea, de (P Tib. ta), Simang taiyo.
 e. L. sua, seu, sa, Naga sa, Jili husa, Door Ch masa, Garo matsa,
 Bod macha, Chép. ja, Maru. chyan, Gur. chen. (Tib. chau &c.) Si-
 mang chinai A. Ch. ho.
 Ason.—machang, macha, masa (See T. U.)

55 *Tooth.*

a A rang, nan-rang; N. Tangk. alara, Binua rangam, didara, Mishm. la.

Iran. danta, dara, dar &c. *Ason*.—Austral. danga, irang &c.

b K. timbang, L. (-jam) tan, Singph. wa, Garo ph. tong, Burm., Marmi awa, Nag. va, wa, ha, Abor ipang, Himal. wa, upho &c., Mlech. bung.

Jap. fa, Ugr. pana, pin, ponk, pankt; Drav. palk, pal &c. *Ason*.—Indon. com. ipang (Abor), ampon, ngipau &c. &c.

c M. ngeek, ngeat, Kas. biniat.

Ason.—Savu ngutu.

d L. khiau khia, Burm. kya Khyeng kyé, Sunw. kryu.

Ch. kbi.

56 *Tree.*

a A. kai, gokoi, Manip. akoi, Sin. kuing.

Ason.—Aru kauri, Tarawa kai, Bis. kahoy, Malay &c. kayu.

b K. chu (Chin. che, chiu, shu.)

c W. ka-ton, ku-nom.

Koreu nemo,

d L. ton, tau, Kas. la diing, (T-Him. dong &c., Khoibu hing-tong.)

57 *Village.*

a A. lang, Kas. ka shuong, thong, Mik. rong, Khyeng nang, Singph. mereng, Manip. D. ram, nam, rahang &c., Abor. damong, Magar langha.

b L. bau, mau, Limb. bangkhe.

58 *Water.*

a A. nuk, Ka dak, Chong tek, K. tug, tak, tik, M. dat, dai, Nancow. rak.

V. nesei dok &c., Bengali udak (Iranian), Fin. tat se. *Ason*.—Tobi tat (Fin).

b M. dai. If this is not a contraction of dat, it is connected with the Tibetan and Gangetic-Ultr. doi, tui &c., Chinese chui &c.

d L. nam; Chop. lang, New. lu, lau. (root Scythic; *Afr.*—Malag. ru, Haus. rua &c.)

e Kas. ka um, Ur. um, Male am, Lepcha ong.

Scythic (Kor. Tungus. mu &c.); Semitico-Afr. com.

59 *Yam.*

a A. kwei (? Limbu khe).

b L. mau, mau-dom, hau-man.

APPENDIX TO CHAP. VI. OF PART II.

C.

COMPARATIVE VOCABULARY OF CHINESE AND TIBETO-
ULTRAINDIAN NUMERALS.*

* In App. C. the roots and not the adjuncts are italicised.

One.

Chin *chit*, *yit*, *it*, *i'*, *che*, *ja'* †; Tib. w. *gechig*, s. *chik*; Himalayan *chi*, *ghrik*, *kik*, *tik*, *kri*, *i*, *id*, *che*; *kat*, *ka*; Dophla *aken* &c.; Bodo *che*, Garo *sha*, Burman *ta-ik*, *tach*, *lit*, *to'*, *ta*, Karen *ta-ple*, Bong. *ka-kar*, Kuki *kaaka*, Khyeng *pa-hat*, Nicobar *lohok*, Naga *van-the*, *katang*, *katu*, *akhet*, *atta*, *cha* &c., Miri *ako*. With the Sino-Tibetan and Burman-Himalayan compare Ugro-African varieties of the root, — *lita* Japan, *ytyk*, *odik*, *it*, *ot* Ugrian; *dik* Darfur *tak* Galla. It is difficult to trace the particular connections amongst these forms. The Ugro-African, Chinese, Tibetan and Himalayan are obviously variations of one root, which is probably best preserved in the full bi-syllabical forms *tik*, *dik*, *chit*, *chik*, which are found in all the provinces. But the centres and lines of diffusion are obscure. The African terms are probably of Seythic origin, like many other African numerals. Some of the Himalayan and Ultraindian forms may also be Seythic through eastern Tibetan, although it is quite possible that they are variations of the proper Tibetan forms. The Ultraindian and Himalayan forms in *a* are so peculiar, that doubt may arise whether they are all Tibeto-Chinese. *Ta*, *ka* may be a variation of *cha*, and *cha* itself of *chi*, but the prevalence of *tu*, *ka* as an Ultraindian and Asonesian definite, and its occurrence in many of the Asonesian vocabularies as the numeral "one," suggests the possibility of a different origin. The Burman *tach*, *taik*, 1, *naach*, *naik*, 2, Naga *not* 2, appear to be only vocalic modifications of *tik*, and of *not* (or *nig*) 2. It is probable that the shorter forms in *a* are modifications of a similar Ultraindian variety of the Tibeto-Chinese root. The Naga *katu*, *katang* [*kat*-in higher numbers], *akhet*, [whence the Dophla *aken*] and the Khyeng *hat*, are probably merely an inversion of an ancient *tak* (Burman *tach*) †. This form spread to the Himalayas (Lepcha, Magar *kat*, Sanwar *ka*, obviously referable to the Naga forms). The vocalic form *tu* is found in spoken Burman, Karen, and some of the Naga dialects, *ata* (Mithan) [whence *cha* Tablung, *sha* Garo, Deoria Churia], in Aor-Miri *ako*, and in Sanw. *ka* †. In the Yuma group in which the dental is replaced by the guttural, as in several

* I only remind the reader that the apostrophe marks the abrupt sound equivalent to a suppressed or inchoate *k* or *t*, so that *i'* is a modification of *tik*, *it*, and *ja'* of *jok* or *jut*.

† Mr. Hodgson's vocabulary of Gyarung, published since this paper was written, shows that these forms have not been produced by inversion, but by the coalescence of a common Ultraindian prefix *ka* (corresponding with the Ancient Tibetan *g-*) and the broad variety of the Sino-Tibetan root. Gyarung has *ka-ti*, (*ti* also found in Takpa, *chi*, a Burma-Himalayan variety contracted from *tik*), *ka-tes* 2, *ka-san* 3 &c. These forms, whatever the immediate origin and no so direct affinities, correspond with the Tibetan, *g-echig* = *k-chik*, *k-uk*, *k-ti*, *g-nyis* 2 &c. In many of the Himalayo-Ultraindian numeral systems, *ka*, *ta*, is retained in terms above 6, in a few it occurs in the lower terms as a prefix. See App. A. p. 3, "Shen".

† [Also in Manyak *ta-bi*.]

Himalayan forms), it takes the postfix *ka*, — *ka-ka* Bongju, *ken-ka* Kuki (whence, probably, the Nicobar *kahak*). This tends to involve the Tibeto-Chinese origin of the final *ch* or *k* of Burman in some doubt, but as it is referable in other terms to Tibeto-Chinese or Tibetan, it may be considered as certain that a broad form (*tak* or *kak*, by contraction *ta*, *ka*, &c.) anciently prevailed amongst the North Ultramindian languages and was thence carried along the Himalayas. Amongst the Himalayan languages the Newar *chhi* is the only term for 1 that is modern Tibetan (Lhop. *chi* Tib. *chik*.) The Murmi *ghik* is a derivative from the Ancient Tib. *gchik*, which, we may infer, had a very strong or guttural sound from which the Murmi *r* was evolved. The Gurung *kri* is a modification of the same form.

The term is radically the same as the definite article and unit of many Scythic, Ario-Celtic, African and Asonesian languages, *tá*, *tí* &c., *ho*, *ka*, *ek* &c.

The Karen *láng* is Lau (*nung*, *nin*). It has remote affinities, North and Mid Asiatic, Dravidian &c. (e. g. *annon* Koriak, *onne* Drav., *eng* Car. Nicol., *non*-bat Austral. &c.). But as the same particle is a widely spread definite, it is probably of native origin in the Lau system (*ní* "this", *nun* "that", Siam. &c.)

Two.

Chín. *wá*, *ir*, *il*, *li*, *no*, *jí*, *gi*; Tib. *ngyis*, *nyi*, *ní*, Him. *nyi*, *ní*, *nhe*, *netchi*, *nis* &c., Miri, Duppla *ant* (Naga), Mik. *hini*, Burm. *nha-ik*, *nhach*, *ne*, *nhit*, Nicob. *net*, Naga *ani*, *gi*, *ne* &c., Khyeng *pa-nhi*, Kar. *khi-bo*, Káple, Siagpho *nkhang*.*

The Chinese appears to have two distinct forms or perhaps roots, and both are found in Ultramindia. The Kwan-Hwa *wá*, *li*, is the prevalent extra-Chinese form, *nyi*, *ní* &c. The Macao and Hokien *gi*, *ji*, is perhaps connected with the Karen *hi*, *hhi*, but it is more probable that both have been formed independently from guttural forms of *ní* (*nhi*, *nyi*, *gi*, *ji*). The final *s* of the ancient or written Tibetan is the parent of the final *s*, *t* of some of the Himalayan dialects, *nis*, Ming., *nishi* Sunw., *net-chi* or *nyet-sh* Limb., *nyet* Lepch. So *anant* Fengsa (Naga). In the other Naga dialects the final consonant is lost in 2, but it is preserved in 7 *ingit*, *anath*, *ain*, *tanet* &c. The Burman *nhit*, *nek*, *nhak* or *nhach* retain it. The Burman *nek*, Nicobar and Naga *net*, *ne*, appear to be connected with the Limbu and Lepcha *nyet*.†

The Chinese term or terms for 2 have no apparent connection with the N. and M. Asian ones, unless *wa* be contained in the Tungusian *yur*, Mongol *cho-yur*. But the root in *r*, *l*, *n*, *d* is the most common Aso-African term for 2. Its forms in other terminations are frequently identical with the Chinese. In Africa it and the labial *ba*, *ma* &c., separately or combined, are almost universal, and as most of the African and Asiatic systems have an ultimate binary basis, the same roots enter largely into the names of higher numbers also. The Iranian *dwa* combines both, as in some of the allied E. Asian terms. Both are found separately and combined in the Mou-An-ni terms, *bar*, *ar*, *ma*, *ba*, &c., and *r* alone is the earlier Dravidian term, *ir*, *er*, *re*, which closely resembles the N. Chinese *ir* as well as the Georgian *geru*, *ori* &c. As *ir* &c. ap-

* *nyet* has the Burman broad form, amplified by the postfixed def., *nhu-ik*, corresponding to the Gyauing *ma-ik*, Maosak *ma-ka*, Thachu *nga-ri*. The Gyami *liang-ku* and *ar-ko* are Chinese varieties, the *li* euphemically amplified by the nasal final.

† [Gyarung *ka-nes*, Ilorpa *ngel*].

pears isolated in the Chinese system, and is not even a Chinese definitive, it was probably borrowed by the original Chinese tribe, directly or indirectly, from a formation in which the two definitives "this", "that" had become* the foundation of a binary numeral system,—*ir, ra* &c. "that." The best representatives of this primitive Asio-African system must be sought in those languages in which *ra, ir* &c. still exists as a definitive and may be traced in the numeral 2 and in higher terms formed from it. The particle is so freely varied in other alliances by the consonant changing to *n, d, t* &c. that there is no reason to suppose that the Tibeto-Uraindian forms *api, ni* &c. have not been borrowed from the Chinese. But closer forms are found in Yeniseian, *ou, inga, hineang* (Kasia *hini*), and other languages.

Three.

Ch. *san, sam, sa, ta*; Tib. *gsum, sum*; Hin. *sum, sam, song, sam* &c.; Miri *n-am-ko, auma*; Dhun. *sum-long*; Bod. *man-tham, Gato ga-tham, atham*, Kar. *the, sa*, Mik. *kathum*, Nag. *asum, azum, she, sa*; lem. *van-rum*, Burm. *sung, thong, song*, Khyeng *pathong*, Boagj. *tunkar, Kuki tunka, Lau sam*.*

The peculiar Naga form *ram, lem*, is found in the Milchanang 13, *serum*, although 3 itself has the Tibetan form *sum*, and is also preserved in the Tibherkai *sa-hum, chop-sum*. [See Ap. A.]

The closest foreign affinities are Korean and Caucasian. Kor. *sai*, Georgian *sumi, sumi* &c., Lesgi *shamba*. The same combination has been carried to Africa *saba, sawa* &c., Mandingo group. In the Caucasian systems the numeral terms are regularly formed from a few definitives by flexion and the coincidence of the Georgian *ori* 2, *sumi* 3, with the Chinese *ir* 2, *san* 3, Tib. *sum* 3, can hardly be accidental.

Four.

Ch. *se, si, ti*; Lau *si*; Tib. *bzhi, zhyi, zhi*, Lhop. *zhi*, Serp. *zhyi*. This term, in its dental and sibilant forms, has made little progress in Ultratindia. Naagaung Naga has *paz*, Angami Naga *da*, M. Angami *dek, Kuki ta, Bodo dia*, which appear to be all modifications of the Tibetan forms of Chino-Tibetan.†

Si, ti, is a very common definitive, and much used as a numeral element. It is found as such in Scythic and African languages (e. g. *teti*, Samoids). But as the Chinese 2 and 3 are most closely connected with Caucasian, and *chi, thi, se* &c. is the principal element in its flexional series of numerals, it is probable that the Chinese is related to the Georgian *oth-chi, at-chi* &c., to which also may be traced the African *ata-chi* (Timbuktu.)

The most common term in the Tibeto-Ultratindian languages requires, from its peculiar form, to be separately discussed. It has been carried by the North Ultratindian tribes to the Himalayas, where it has Naga, Gato and Borman forms. Burm. *le, Boagj. lekar*, Khyeng *lhi*, Kar. *li* Naga *phali, phale, beli, pili, ali*, Siogphu *meli, Mikir phili, Gato bri, Bodo bre*; Himalayan,—*api* Daphla, *plei* Chepang; *le* Soow. (Buran), *h sh* Lamb. *phali, phulut* Laph., *buli* Mag., *bi* Marmi; *pli*, Gur; *laga* Kiranti.

* [Thochu *kshiri*, Gyami *sangku, sin*, Gyarung *kram*, Hlopa *su* (T. Naga), Takpa *sum*, Manyak *si n* (Thochu *shi*, Nag. *she*, Kar. *the*)].

† [Thochu *gzhuro*, Gyami *si, sika*, Gyarung *kadi* (Bodo), Hlopa *ala*, Takpa *pli*, Manyak *rebi* (Burm. Him.)]

These are all North Ultraiidian forms. Pi, N-war, Therkath, is identical with the Abor-Miri *apiko*, *apie*, which is a contraction of *apliho*, as appears from the Dapida form *apli*, and from Abor-Miri itself preserving the full Naga form in *pili-n-g-o-ho*, G. The Mithchurang *pu*, *puk* is probably a modification of *pi*, corresponding with *ba* in the Mugar *buli*. This is more probable than that it is a direct derivative from the Mon-Anam and Vindyan *pan*. But *pu* may itself be related to the Burm-Himalayan terms. The latter, in some of their forms, are identical with certain forms of the African numeral which appears to have been the original of the Mon-Anam, Malagasi and Asonesian terms. As that numeral is itself founded on a root for 2,—*li*, *ni*, *lu*, *nu* &c., which is common to Chinese with many Asiatic and African languages, and as the term for 4 so formed had a very archaic and extensive prevalence in Asia and Africa, there are several possible sources of the Burm-Himalayan term. The simple forms *le*, *li* &c. are identical with the Chinese *li*, 2, of which the Tibetan and Ultraiidian *nyi*, *ni* &c. is a slight modification. It may, therefore, be a derivative from an east Tibetan dialect, or it may have been formed in Ultraiidia from the Chinese *li* or the Tibeto-Ultraiidian *ni*. But it is improbable that such a term for 4, or mode of forming 4, prevailed in eastern Tibet, when the Chino-Tibetan system has a distinct term for 4. It is equally improbable that the principle of constructing such a term was acquired in Ultraiidia after the Chino-Tibetan system was introduced, and was then applied to the invention of a new term for 4 which displaced the proper one of that system. The simplest conclusion is that *li* is a modification of the Chinese *li*, 2, through the sonant form, of which we have an example in the Bodo *dia*, whence the Angami-Naga *da* &c. The Tibetan sonant *bzhi* is probably the immediate parent both of the sonant dental forms and of the labial prefix (*bazi*, *badi*, *buli* &c.).

Five.

Ch. *ngu*, *u*, *ing*, *ngô*, *go*; Tib. *hna*, *qua*; Him. *qua*, *qua*; Miri *angoko*, *ungo*, *piling-ko* (*pui*, 4, Naga); Dhim. *na*, *Mik pheng*; Naga *nga*, *nga*, *baŋa*, *phanga*, *pungu*, *phanga*, *pengu*, *pengu* (the Bodo *ba*, *bha* is probably a contraction of the Namsang *baŋa*); Sengph. *manga*, Burm. *nga*, *na*, Kar. *yai*, *ye*, Khy. *uŋan*, [Nic. *tuahv. unai*]*; Kuki *nga*, Bong. *raingukar*†. The Karen *yai* is exceptional. It appears to be Eravirian (*yai*, Yoda, *ayi*—*lu* Telug. *ayi-nu* Tal &c.).

The Chino-Tibetan nasal root itself, *nga*, *ing*, *nga*, *na* &c. is allied to the Dravirian *an*.

Six.

Ch. *lo'*, *la'*, *lu'*, (i. e. equivalent to *lok*, *luk*, *luh*); Tib. *w. druk*, *s. thu* W. Tib. *dus*, *tuk*; dhu Lhop., *tuk* Serp.; Him.—*dhu*, *tu*, *khu*, *tuk*; Lep. *tuok*, *tiok*, Sanw. *rak*; Chop. *kruk*, Bodo *do*, *ro*, Dhim. *tu*, Garo *krok*, *da'* (Chepang), Mikir *thorok*, Naga *tarok*, *tho'*, *urk*, *irok*, *soru*, *azoi*, *vak*, Singph. *kuu*, Burm. *khrank*, *khyok*, *khyauk*, Bong. *rhukar*, Mon *karau*, Ka *tau*. Chongl. *khang*, Abor-Miri *ukye*, *akengko*, Kuko, Kar. *An*.] The distribution of these terms is peculiar. The wide

* Probably Mon-Anam. See App. A.

† [Thocha *ware*, Gwal *mu*, *waŋu*, (Chin. *u*) Garo. *kneggn*, Horpa *gwe* (Chin. *go*). Tapa *ŋa gae* (i. e. in Miri), Manyak *ganbo*.]

‡ [Tapa *ŋa*, *waŋu*, Gyar. *kakaa* (Tib.), Tapa *kro* (Singpho, Garo, Chop.), Manyak *trabi*]

aprend khrauk, hrak, karau, trau &c. is evidently an archaic East Tibetan form of the Chinese *lu* or *luk*, allied to the Written Tibetan *druk*. Its diffusion amongst languages of the Mon-Anam formation is probably attributable to the numeral system of the latter having been purely quinary, or without any substantive term above that for 5. It is found in Kol and Gondalso. The Naga *tarok* might be thought to be an immediate derivative from the Tibetan *druk*, if it did not occur frequently as a prefix with other numerals and words, and the numeral root, *ruk, rok, lok*, occur bare and with distinct prefixes in other Naga dialects. The Garo *krok* and Chepang *krak* are obviously derivatives from the Burman *khrauk* and although the Lepcha *tarok, trok*, resembles the Tibetan *druk*, I have no doubt—looking to the cumulative evidence of the influence of Ultraiidian forms of numerals and other words on the Himalayan—that it is a derivative of the Ultraiidian *tarok* (Nagaung Naga.)

The Karen and Kuki *ku*, Dhimal *tu*, Bodo *do, to*, Naga *so-ru*, Bong-jurhu-kar appear to be contracted terms, which in Changlo and Abor-Miri take a nasal final *khung, hong*. The Abor *a-hye* and Dophla *a-k-ple* present it in a very curt form, and the latter curiously preserves the Karen postfix *ple*.

Seven.

Ch. *chhi, ch'hit, ch'het, thet, sit*; Lau *chet, chiat, tset*, Singph. *sinit, Kyen shi*.

The allied Ultraiidian and Himalayan terms are remarkable. The Mon-Anam or earlier Ultraiidian system was quinary, and a like system is still seen in the Burma-Himalayan terms for 7, which are simply the term for 2 sometimes slightly modified. It was doubtless formed on the model of an ancient quinary term, 5-2, the term for 5 having been lost. The circumstance of the root for 5 not being found accompanying that for 2 in any of the languages, is a strong proof that the prevalent Burma-Himalayan numerals were derived from one language which had dropped the term for 5 before it became diffusive. The Tibetan term is *bdun, dun*. It has made hardly any progress on this side of the Himalayas, the only examples I find being the Lhopa *dun*, Serpa *dyun* and Changlo *zum*, a modification of the Lhopa *dum*. The Tibetan term is not Chinese, but it is Tungusian *nadan*, Mong *dolan*,* Korea *litun*, and it enters into the Kamchatkan *nytonok* &c.

The following are some of the Burma-Himalayan terms. Burm. *khwan nach* or *nak, khunhit, kuni*, Abor, *kunit-ko* Miri *kunido*, Nag. *tanet, nith, anath, ingit* &c. Singph. *sinit*, Garo *sining, snit*, Bodo *chini, sui*, Dhim *nhi*: Kar *nui, nui, nis, chani, nhe, noshi*, Kuki *s. sri* [Garo *sui*], Bongj. *are-kur*, Kasia *hinian (hini in 2 in Mikir)*. The Abor-Miri *ku-nit-ko, ku-nid-e*, is directly connected with the Burman *khun-nhit*.† The Dophla *ka-nog* is the same word with the final *t* of 2 converted into a guttural, as in the ancient Burman *nah, nach* &c. The Kiranti *bhap-ya* alone preserves the proper term of the Mon-Anam system. Comp. Mon *ka-bok* (from *bo, 2*). The prefix *ka* is found in Lepcha from 7 to 10, but the term for 7, *kyok*, is peculiar.

* [Sokpo tolo].

† [Gyarung *kush-nes, Takpa nis*].

Eight.

Ch. *pat*, *pa'*, *boi'*, *poi'*. This term has not been borrowed by the Tibeto-Ultradian languages. It is found in Lau, *pet*.

The Tibetan term is *brgyad* w. *gye* s.* The ancient form (probably still prevalent in E. Tibet) requires to be compared with the Ultradian and Himalayan terms in which *r* is the consonant. The Kasia *prah*, if it stood alone, might seem to be a contraction of an ancient Tibeto-Ultradian form which preserved the Tibetan prefixal *br*. But as the Kasia term for 2 is *ar* (Mon, Kol, Chong, *mar*, *bar* &c.) it is more probable that *prah* is formed from it. In many systems primarily based on a binary scale, 4 and 8 are modifications of 2. From the Kasia form comes the Nicobar *avara*. The other allied terms lose the *p*. They are *rach* Burm. w., *rai-kar* Bongju, *rae* Kuki, *rai*, *chai* Mlchanang. But some doubt is thrown on *rai* by the Tibberkad *ghai*, the Tibetan form *ghah* being also found in Tibberkad. Final *i* is affected by these extreme Western languages of the Gangetic formation as well as by some of the extreme Eastern (e. g. Bodo) which have received it from Ultrindia (Karen &c.) Thus 5 is *gnai* (Tib *gna*), 6 is *tuki* (Tib w. *tuk*), 9 is *gui* (Tib *gu*). Final *i* being common to Mlchanang and Bodo, the Bongju and Kuki *rai*, *rae* are in favour of *rai* having been the form of the Kasia *ar*, *ra*, 2, that prevailed in Bodo and the other Gangetic languages and was spread as far west as Kanawar. The common interchange of *r* and *g* or *gh* would of course explain the conversion of the Tibetan *ghe* into *re* as well as the Ultradian *ra* into *gha*, the vowel being a small element in favour of Ultradian origin. The point however is, I think, settled, 1st, by the evidence in favour of an early diffusion of Ultradian words up the Gangetic basin and across the watershed into that of the Sutledge, and against any early diffusion of Tibetan words from the Sutledge down the Gangetic basin; and 2nd by the Kasian term *prah* being found in the Chepang *prop*, Gurang *pre*, Marmi *prech*, *pre*. The Kiranti *reya* gives us the root again. The forms in *pr* are connected not only with the Mon-Anam term for 2, but with the prevalent Burmah-Himalayan terms for 4, *pali*, *pli*. In several of the languages 8 appears as a mere flexion of 4 (i. e. 4 dual). Gurang 4 *pli*, 8 *pre*. In the Abor-Miri *pu-nit-ko*, Abor *pi-nye*, the labial is the term for 4, (*a-pi-ko*, *pu*, *bu*, Nipal, Mlchanang, combined with that for 2 (i. e. 4 the 2nd time or twice). In the Daphla *plagnag* the same combination is found (See 2, 4 and 7).

The common N. Ultradian term is a similar binary remnant. Burm., *shit*, *shyt*, *s'*, Khyeng *shat*. Naga *isat*, *acheth*, *achet*, *sachet*, *te*, *thosop*, *thuth*, *thetha*; Singph. *mutsat*, *mukat*, Guro *chet*, Bodo *jat*.† All these appear to be modifications of a term preserved in the Kiranti *haat*, 2, and having affinities with some N. Asiatic binary terms for 8, i. e. Samoiote *shit-seli*, *siti-wiwa*, Tungusian *dachap-kun*. The root is primarily 2, — Samoiote *shit*, *siti*, *side* &c., Ugrian *hit*, *het*, *hat*, *kek* &c. &c. and may be recognised in the Chino-Tibetan *si*, *ti*, *zhi* &c. 4 (i. e. 2 dual).

The Limbu *yet*, Suw. *yoh*, Dhimal *ye*, are probably Tibetan (*gye*). The Lepcha *ka-ken*, *kuku* is probably an ancient term formed from the

* [Gyaring oryet, Takpa gyet.]

† [Manyak zibi].

W. Tibetan *gyd* &c. The Karen *hgo*, *kho*, is allied to it.

Nine.

Ch. *hiu*, *lau*; Tib. *dgu*, *gub*, *gu*, Him. *gu* &c.; Ultraiudian *ku*, *ka*, *kho* (with prefixes &c. in some dialects); Singpho. *tsoku*, Himsl. *ku*, *kub*, Changlo *tuké* (Naga); Bodo *chka*, Gar. *ju*, shik. Mibchanang *sgoi*; Lai *kaw'*, Karen *kui* (Chinese).*

Ten.

Ch. *shí*, *ship*, *chap*, *tap*; Tib. *bcu*, *chub*, *chu*; Him. *chuk*, *chui* (Tiberk); Ultraiudian, — *shi*, *chi*, *che*, *si*, *tai*, *se* Burman, Karen. Naga &c., Garo *chi*, Bod. *ji*. The Ultraiudian is 'closer to the Chinese than to the Tibetan form, and it has been carried westward into the Himalayan dialects, *chi-mai*, *sa nba*, *thi hong*, *sa*. The term is evidently the Chinese-Tibetan root for 1, *chit*, *chik*, *chi* &c. a mode of naming 10 (1 *tsie*) found in many other languages. That the Ultraiudian and Himalayan forms have been derived from Chinese, or from an eastern Tibetan vocabulary, is further shewn by the Mikir *kep*, Kiranti *kép*, which is the Chinese *chip*. The Burman *tí-che*, Rakhoing *tá se*, prefix the term for 1 without its guttural final.†

In the Chinese system the numbers between 10 and 20 are formed by placing the lower numbers after the word for 10, while the articulate terms or *tens* are formed by placing the lower numbers before the word for 10, which precisely accords in principle with the Hindu, Arabic and European notation, although not with the nomenclature in the series between 10 and 20 (e. g. 13 corresponds with the Chinese naming, but not with ours which places the digit before the ten, *thir-teen*; but *thir-ty*, *thirty-one* &c. correspond with the notation, 30, 31). The following examples will show the consistency of the Chinese notation with the collocation of the words, *chap* 10, *chap í* 11, *chap ji* 12, *chap see* 13; *ji chap* 20 (2,10), *sa chap* 30 (3,10) ‡

* [Gyarung *kungga*, Takpa *dugu*, (Tib). Manyak *gubi*, Horpa *go*, Thochu *rgure*.]

† [Gyarung *si'*, Manyak *chechibi*, Takpa *pchi*].

‡ *Note on the Chinese and Indo-Arabic numeral symbols.*

Names of numbers must have preceded *symbols*, and the Indian symbols must have been invented by a nation which followed the Chinese system of naming, that is such a term as *thir-ten*, *traya-dasham*, *trish* could not have been used by it. The Dravidian and Mon-Aram systems agree with the Chinese in placing the decimal in its natural place, e. g. 11, *pai num* (10,1) in Tamil; *gel miad* (10,1) in Kel; *moi mot* (10,1) in Mon; *kad wei* (10,1) in Kasia. That this system is the natural one is proved by its prevalence in other languages, American, Asiatic (Seythie, Georgian, Euskarian &c.), and African. The Indo-European and Semitic collocation is exceptional.

The perfecting of the decimal notation must have been a slow process, and may have been the work of the civilised Dravidians or other pre-Arian nations of India. But the Chinese had advanced far in this direction, and there are sound grounds for attributing the rudiments not only of the system, but of the symbols also, to them. The Chinese symbols for the three lowest numbers are respectively 1, 2 and 3 strokes,

placed horizontally in the formal, and vertically in the common, notation. The Indian and Arabic figures—the originals of the European—are obviously cursive or connected forms of similar symbols, and it is curious that in the Indian—from which the Arabic are supposed to have been derived—the strokes are horizontal, while in the Arabic they are vertical, from which we may perhaps infer that vertical symbols were at one time partially current in India also, or that considerable license prevailed in their position. But the Arabic are so much closer to the vertical Chinese than to the Indian, that it appears most probable they were directly borrowed from that system. A comparison of alphabets shows that written symbols are very apt to be turned in all directions, right or left, up or down, in their progress amongst rude tribes, prior to the adoption of uniform materials for writing. Leaves, bark, hard bambu, cloth, coarse paper that blots, styles, reeds, quills, brushes, paint, ink &c., all influence the form and position of the symbols. The Chinese symbol for 4 appears anciently to have been, in its rudiments, 4 strokes, a horizontal with two dependent vertical, and a smaller horizontal carried out from the bottom of the right one. It has been complicated by adding two large vertical lines at the sides and one at the bottom, forming with the upper horizontal line an enclosing square which would itself represent 4. In the common figure the four lines are obtained by a simple crossing of two curved strokes. The Indian symbol is a similar cross, but with the bottoms of the curved strokes joined and rounded, that is, the figure is written without lifting the pen, and the two strokes run into one symbol, as with the Indo-Arabic 2 and 3. In the Chinese 9 the symbol for 4 is sometimes looped in the same way. The ancient Chinese 5 appears to have consisted rudimentally of 3 horizontal, crossed by 2 vertical, strokes. The common figure is a very remarkable one. It consists of a body precisely resembling the Indian form of 4 (that is, a cross converted into a loop by writing it without lifting the pen or brush), and a short stroke carried up from the left point, or it is a stroke with the symbol for 4 affixed (i. e. 4, 1). It appears to be a rounded, cursive, unilinear modification of the ancient symbol for 5. The Indian, Arabic and European figures for 5 vary greatly, but some strongly resemble the Chinese symbol. The Zend is evidently this symbol curtailed of the loop. The Devanagri, Mahratta and European are also close to it. The common figures for 6, 7, 8 and 9 are quinary, that is, they are the figures for 1, 2, 3, and 4 with a short vertical stroke to represent 5, or distinguish them from the lower series. In 9 it rests on a horizontal stroke, the figure 4 having no stroke of the kind to support it, as in 1, 2 and 3. The formal symbols are probably less simple compounds of a similar kind. The upper part of 6 is the common figure, (equivalent to 5, 1). The nomenclature was also probably quinary. The ancient 8 and 9 appear to be related. 9 is 4 without the three enclosing lines, and with the left vertical stroke prolonged above the horizontal line to represent 5. The Indian, Arabian and European symbols for the higher numbers vary greatly, and the same figure has different powers in different systems, but, like the Chinese, they appear to have been originally formed from the lower ones. Thus the Devanagri 6, is 3 reversed, with the addition of a small curve at the top. 7 is, in general, two strokes like the letter v, but variously placed, sometimes curved in both or one of the strokes and frequently resembling 1. The 7 of Devanagri and one variety of

Arabic resemble the Arabic and European 9, which is also the Indian 1, the Arabic and European preserving the simple Chinese form. The Devanagiri uses the same symbol for 9 with the loop on the *right* side. The same symbol serves for 6 in Arabic with the loop below but on the left side; while in Malhatta with the loop on the right, as in our 6, it is the symbol for 7. The figure for 8 is rudimentally a simple inversion of that for 7. In some systems it appears to be formed from 4 (as the name is in some systems, i. e. 8 is 4 dual). In general 9 is a modification of 6, as that in some forms is of 3, thus corresponding with the trinal nomenclature, 3, 3 dual, 3 trinal.

It may be inferred from the above that the Chinese and the various Indian figures are ultimately referable to one original, whether in China, India, or S. W. Asia. Some of the rudimentary symbols, as well as the principle of combining and modifying them, are common to all the systems. The Chinese mode of symbolising numbers above 10 is ruder than the Indian. They have distinct symbols for 10, 100, 1000, and 10,000, so that their notation exactly corresponds with the oral expression. Thus the figures for 236 consist of the symbols for 100, 10 and 6, with the symbol for 2 over the 100 and that for 3 over the 10, and it is read off "Two hundred, three ten, six." The circumstance of the figures being placed or read from left to right, instead of from top to bottom or right to left like the symbols of the ancient numerals and the ordinary characters, appears to show that the Chinese system has been influenced by the Indian and European. But its general character is that which the latter probably presented in its earliest stages. It is not likely that the idea of value from place alone preceded the use of figures, while a foreign civilised nation which had adopted the Chinese methods would be more ready to discover that the symbols for 10, 100, &c. might be dispensed with or understood, and to reject them, than the Chinese themselves. The rudiments of the Indo-Arabic notation are preserved in Chinese, and probably originated with that race.

* The Tibetans and most of the Burma-Himalayan tribes follow the Chinese in their mode of naming the numerals above 10. But there are many exceptions and irregularities, occasioned by the mixture of systems and terms, and by languages mutually borrowing. For example even the Lhopu has not only the Tibetan term for 20, *nyi she* 2, 10, but a hybrid term *kherhik* in which the Tibetan *chik* 1, is suffixed to *khe* which must be 20 or "score"; 30 is *khe-pheda-ni*, 40 *khe ni* (score 2), 50 *khe-phedang-sum*, 100 *khe nga* (score 5). In Lepcha *khe* is *kha*, 20 *kha-kat*, 30 *kha-kat-sa kati* (score one and ten), 40 *kha nyet* (score two), 50 *kha nyet sa kati* (score two and ten), 100 *kha kha ngon* (score five). In Sunwar we find 20 *khalka* (score), 30 *sasi san* (10, 3); 40 *khak neshi* (score 4); 50 *khak nishisusika* (score 4 and 10 one i. e. scores 4 and tens 1).

* In the terms for 100 Chinese and Tibetan differ. The former has *pe'*, *be'*, *p'*, equivalent to *pak*. The latter has *gya*. The Tibetan term appears to be unknown in Ultratania. The Chinese is found in two Naga dialects, *puga*. The ancient Tamil *paka* has an accidental coincidence with the Chinese term. But the root *pa* may be ultimately

† The two paragraphs marked * should have followed "Ten" p. 27.

referable to a similar source with the Chinese. Both the Chinese and Tibetan terms have some appearance of being flexions of the terms for 8. Chinese 8 *pat*, 100 *pak*; Tibet 8 *brgyud*, *gye*, 100 *brgya*, *gya*. If the scale is based on a binary one, as is probable, the resemblance is real. In some of the Mon-Anan languages the same root is found expressing 2, 8, and 100.

Addendum (p. 18.)

47 Road.

- a. A. dang, L tang, M dan, ga-lan, K, *kalanti* (T. U.)
- b. K. *chira da*.
- c. A. ngaba (? Bodo, Dhimal lama, dama Tib.)

D.

COMPARATIVE VOCABULARY OF MISCELLANEOUS WORDS COMMON
TO TIBETAN, INDIAN AND ULTRAINDIAN LANGUAGES,1 *Air*.

a. T. *w. lungma*, *s. lhakpa*, Serp. *lungbo*, Milch. *lan*, Kir. *hak*, Murm. *ihaba*, Gur. *ungmro*; Mishm. *arengga*; Nag. *rang-bin*, *raog-cho*, Manip. *ung-sit*, *thirang*, *phunra*, *khirang*, *nong-lit*, Garo *lam-par*, Lau *lom* (1).

Burman alliance, *li*, *le*, *kali*, *tali*, Changlo *ridi* &c. (Gyarung).

The Tib. *lhak*, Kir. *hak*, probably occurs in the Lepcha *sag-mot* "air", sak-ni "day", and in the Limbu *tam-sak-pe* "sky", *sa-chak* "sun".

Drav. *clara* Fin *lil*, *ilma*, *lemin*, Yukahiri *ili*, Turk. *il*, *eil*, Aino *tera*; Gurm. *churi*, Georg. *kari*; Iran. *aura*, *aer* &c.; Semitic ("wind") *ro*, *ire*, *ira*; African *ahru*, &c.; Ason.—Meri *longiangi*, Sambawa *langi*, Pol ("wind") *malangi*, Rotuma *leang*, Sumba *viru*, Mandh. *iri*, "wind", *iri* Pol. *savili*, Parig. *pu-ire*, Kaili *powiri* (The same root is found in "sky", "sun" &c.).

2 *Ant*.

a. T. *w. grogma*, Serp. *rhanma*, Sanw. *rog-machi*; Aka *tarak*, Ab. *tarak*,

b. T. *s. thoma*, Lhop. *kyoma* (2).

Ason.—Binua *tami*, Silong *kedam*, Ilok. *lutom*.

3 *Arrow*.

T. *w. mlah*, *s. da*, Serp. *Lh da*; New Bodo *bala*, Sanw. *bla*, Karen *pla*, Singph. *pala*, Jili *mala*, Nag. *thelu*, Manip. *la*, *lu*, *ula*, *mala*, *mala*; Burm. *mra*, *mya*, Murui, Gur. *Mag. mya*, Kir. *mo* (3).

Iran.—*pilu*, Sansk.; [*vil*, *velu*, *hilla*, "bow" Drav.,] pilum Lat., *pijl* Dutch, &c. E. Afr. *mpamba* Suah., *impamba* Makua (Drav. *ambu* &c.); Malagas. *avana*, Yoruba *offa*, Sech. *bura* "bow", Makua *mura*, "bow" Asonesian, — Pol. *tan*, Pagui *rorow*, Lobo *lara-kai*. The most prevalent Malayu—Polynesian terms are of direct Malagasy and African derivation. Indon. Pol., *tana*, *pana*, &c.

4 *Bird*.

a. T. *w. byu*, *Lh. chya*; Tiberk. Milch. *pea*, *pia*, Lep. *pho*, Limb. *bu*, Chep. *moa*; Male *puj*; Nag. *vo*, *o*, *thevu*, Manip. *va*; Singh. *wu*, Kyo *wa*, Kuni *ka-wa* (4).

Asones.—Samb. *pio*, Kis *bau*.

b. T. *s. chya*, serp. *jua*, ? New jhango, Sanw. *chi-va*, Mish. *tsa*, Dhim.

(1) [Gyarung *tali* (Young-lhu, *tali*, Karen, Khy. *kai*, Burm. &c.), Manyak *mardah*; Takpa *rho* (Gur *mro*)].

(2) [Takpa *thokpa*, Manyak *barah*, Gyarung *korok* (Tib. *grog*), Thochi *tu-khra*, Sokpa *khora-khwe*, Horpa *skhro*].

(3) [Takpa *ula* (Burm.), Manyak *ma* (Burm. &c.), Horpa *la* (Tib.)]

(4) [Gyarung *pye pye*, Takpa *pya* (Tiberk. Milch.), Gyami *sphui-chher* (Chin. *chio* &c.)]

jiha; Manip. *masa*, *macha*, *maisa*, Nag *uso*, *uzu*, *ozah*, *auha* &c. (4 b).

Chin. *chiau*, *chio*, *tio*; Korea *sai*, Aino *zaf*, *chirpa* &c. Tongus. *gasha*, Turk *chush*, *kush*, *ku-shu*, *kus*, &c. Magyar *katsa* (fowl). *Caucasian*.—Loag *heso*, *uza*, *utzu*, Circ. *zis*, *chshi*, Georg *kinchi* *Asonesia*.—Rima *janga*, Mank. *jaung jaung* (Nawar); N. Aust. *bijij*; Komr. *sisu*, Lamp. *su* ("fowl"); Sam. *tahu*, *chundo*, *chiacha*; Mong. *shobo*, *shobon*, *sebechu* Hind. Beng. *chiriya* (see also *Mon-Anam*).

5 Blood.

a. T. w. *khrag*, s., Serp. *thak*, Lh. *thyak*, Milch. *pulach* (5).

Bengali *rakta*, Sindhi *rai*, Sansk. *rudira*, Nic. *kanak*; Ugr. *uwarak*; Afr.—Saumali, Galla *dik*, *diga* [the *Asones* Pugai logow, Buol luku, Mag. lugu, rogo &c. Roti daak, are probably from *dara*, *lura*]

6 Boat.

a. T. w. *gru*, Lh. *dru*, *du*, Chang *dru*, Serp. *thu* (6). Abor *etku*, Mish. *rua*, Garo *rung*; Gang-Ultra *dunga*, Nag. *lung*, *surung*, *arung*, *ru*; Murung *rung*, *dunga*; Khyeg, Lungkha *laung*, Kumi *plauug*, *mlaung*, Kyo *plauug*, Mon *kleng*, *ga-lon*, Lau *ru*, *reua*, An. *ding*, Kas. *ling*, Burm. *ihe*, Singpho *li*, *kar khli*.

Ason—Mair. *ora*, Tilanj *alina*, Tag. *longa*, Jav. *palang*, Indon. *bara*, *bula*, *parau*, *prau*, Pol. *falau*.

b. T. s. *koa*; Nag. *koa*, *khuon*, *kho*, *khung*.

Asones.—Savu *kowa*.

c. T. s. *syen*, Nag. *yesang*; *ihseng*.

Chin. *chiu*, *ch'hiang lang*.

7 Bone.

a. T. w. *ruspa*, Mag. *misya ros*, Sunw. *rushe*, Chap. *rhus*; T. a. *ruko*, Serp. *ruha*, Gur. *nag-ri*, Murm. *nakhu*, Lh. *rutok*, Mish. *ruboh*; Nag. *arah*, *rha*, *rah*, *aru*, *uru*; Lepch. *arhat*; Manip. *saru*, *karan*, *maru*, *para*, *soru*, *aru*, *arukau*, *uru*, *thuru*, *khru*; Yuma *ru*, *aru*, *ar*, Singph. *urang*; Burm. *aro*, *ayo*; Lau *duk*, *nuk* (7).

Drav. *elume*, *elura*, *elu* &c. Pashtu *alakei*, &c. Semitic. *alam*, *alat*; Cauc. *ratla* &c. Malag. *taolana*, *tolan*. *Asones*.—Jav. *balang*, Lamp. *belu*; Austr. *pura*, Baw. *loh*, Komr. *lolor*, Soler. *riuk* (? Lau), Erub. *lid*, Taraw. *ri*; Indon. *tulang* &c. (*Malagasy*).

8 Buffalo.

T. w. *mahi*, s. *mahe*. Lub. Lepch. Murm. *mahi*, Gur. *mai*, Serp. *meshi*; N. & C. Tangkhul *shi*.

Hind. *bhains*, Beng. *mohish*. Semitic *gam-bus*, *jamus*. The original term was probably the wide spread *mos*, *bos* &c. "cow" [see Naga.—Himalayan "cow"; Naga *masi* &c.]

(4 b.) [Manyak ha (Naga aulin)].

(5) [Takpa khra]

(6) [Gyarung bru, Takpa gru, Manyak gu]

(7) [Tho-chu ripat, Gyar. sya-rha, Takpa *rospa*, Many. *rukhu*; Horpa *rera*]

9 Cat.

a. T. *w* byila, Lh. pilli.

Hind. billi &c., Lat. felis.

b. T. *s*. simi; Nag. ami, miang, mish, mechi, mesa; N. & C. Tangkul *tuui*, *laine*; Yama mi, *ami*, mim, min-boi, mi-yuang; Kar. ma-miya; ? Kamb. china; Bod. mouji (9).

Mongol mii, Japan mio &c. Chinese miao, hio, niao, ngio; *Asones*.—

Indon. miong, miao, mia, mao &c.

Is the Tib. *simi* connected with shaga, "lion." In Indonesia sing, *uching*, *uching* is a term for "cat".

10 Cow.

a. T. *w* ha, *s* pha chuk [Tangus *chyukim*], Sunw. bi, Lihb. *yopi*, Dhim. pia; Burm. *awa*, *uwo*, Kar. *wa bung*, *ga phi* (10); Lau won, Au. bou; Drav. *awu*, *awu*, *pel* &c.

Indon. *sapi*

b. Bh. Milch. lang.

Fin. *lehma*, *lehma*; Cauc. ol, al; Semit. *la* (root); Galla. Amharic *lam*, *harak*, *lah*; Galla. *lawom*, *lawom*, *saahin* *lombe*; *Ason*.—Indones. *limbu* &c.

11 Crow.

T. *w* khata, Sunw. *khad*; Magar. *kag*. T. *s*. *ablak* (11), Serp. *halak*, Lh. *ola*, Lepch. *ohok*, Gur. *mlongya*.

[Drav. *Vindiy*. Gang-Ultr. *kha*, *ka*, *khawa*, *kag* &c.].

12 Day.

T. *w*. *nyimmo*, *s* *nyimo*, Serp. *uimo*, Lh. *nyim*, New. *nhi*, Mag. *nam-sin*, Sunw. *na-thi*, *hep* *nyi*, *ngi*. Chang. *ngam*, Dhim. *ngi timu*; Naga. *anyi*, *ni*, *dini*, *uh*; Singph. *sini*, *Jili tam*, Burm. *ney*, Kar. *ni*, Yama *taui*, *han-ni*; Anam. *nyet* (12).

Tangus. *ininy*, *manyi*; Yenes. *na*; Cauc. *kini*, *dini*, *Asones*.—Burm. *ngo*, *nga*, *ungu*, *Sambaw* *ano*, *Buol* *na* &c.; ("sun", Indon. *neno*, *inai*).

13 Dog.

a. T. *w* khyi, Serp. Lh. *khi*, (13) Milch. *kwi*, Tiber. *kaoi*, Lihb. *khia*, Murm. *nangi*, New. *khi-chu*, Gur. *nayya*, Mag. *Chap* *kui*, Chang. *khu*, Aka. *Abor* *eki*, Dhim. *khia*, Gur. *kui*; Naga. *kui*, *hi*, *hu*; Mani. *wi* &c., Singph. *kwi*, Burm. *khwe*, Kur. *htwi*, Yama. *wi*, *ui*, *bui*; Kamb. *chaki*.

Chinese *khiao*, *keu*, *keo* &c., Korea *kai*; Mong. *nakai*, Fin. *koira* *kario* &c. Caucas. *koy*, *choi*, *wai*, *gwei*, *kari* &c. *Asones*.—Bin. *koih*, *koyo*, Phil. *kua*, *arui*.

b. T. *s*. *ayo* (? *Seythio*, from a form similar to the *Binna* *koyo*)

(9) [Thodu *hadi*, Sakpa *simi*, Manyak *manhen*, Takpa *stinde*]

(10) [Thou *bu gwa*, Manyak *wo-mi* (*mi* is used generically as in *ding-mi* "buffaloe", see also "Cat")]

(11) [Thodu *nyagwa*, Gyauung *tabrok*, Takpa *al*]

(12) [Gyarung *nye*, *pish-nye*, (Burm.), Horpa *nye-le*, Takpa *nyenti* (Dhim. *Nag*). Many. *mastcha*]

(13) [Gyarung, Takpa *khi*].

14 *Ear.*

a. T. *w.* *rna*, *rnawa*, *na*, Lh. *naru* Kir. *naba*, Marm. *nape*, New. *nhai pong*, Gur. *nube*, Mag. *na kyep*, Sunw. *nepha*, Chep. *no*, Chung. *na*; Naga *na*, *tenaung*, *telatu*, *tenhaun*, *anve*; Manip. *na*, *hann*, *khe-na* &c. [but this may be from *kan*]; Singph. Burm. Kar, Yam. *na*, Kar. *nho*, *ka-na*. (14)

Cauc. *en*, *in*, *hanka*.

b. T. *s.* *am-cho*, Serpa *am-chuk*.

15 *Earth.*

T. *s.* Serp. Marm. Gur. Chep. Chang. *sa*, Lh. *seh*, New. *cha*, Mag. *jha*; Bod. Gar. Nag., Karen *ha*; Naga *ha-wan* (15.)

Samoid *ya*, Jap. *tsi*, *zi*; Turk. *yazhan* &c.; Cauc. *misa*, *musa*, *mitza*, *sach* &c.; Zend *sa*.

16 *Egg.*

T. *w.* *sgonga*, *s.* Serp. *gongua*, Lh. *gongdo*, New. *khyen*.

Cauc.—Lesg. *gunuk*, *kor-kon*, *gaga* &c

17 *Elephant.*

a. *b.* T. *w.* *glang-chen*, *s.* Serp. *langba*, Lh. *lang-chen*, (17) Chang. *lang-peli*; Champh. *lamun*; Burm. *w.* *chhang*, *s.* *chen*, Kar. *kehong*, Khas. Yam. *sang-hung*, tshi, *hasai*, *kushai*; Mon shen, tsin, Lau tsang, *chang*, *tyang*, *chiang*.

Chinese *chhiang*, *sio*, *siong*; Suahili *simba* *Asomes*.—Jav. *leman*, Timan, (Champhung), Binua, Mal. *beram*, Bin. *brangte*, *bringkil*.

18 *Eye.*

a. T. *w.* *mig*, *s.* *mik*. (18) Him. *mik*, *amik*, *michi*, *mi-do*, *mok*, *mi-kha*; Abor *amig*, Kol *met*, *med*, Dhimal *mi*, Bod. *magon*, Gur. *ma-ka*; Naga *mit*, *mik*, *teuk*, *tenvik*, *tenok*, *amhi*; Manip. *mit*, *mihik*, *mik*, *amuk*, *amicha*, *omit*, *amit*; Singph. *mi*, Burm. *w.* *myak-chi*, *myet-si*; Kas. *kamot*, Mon *mot*, *pamot*, An. *mat* [See Mon-An. and Drav.]

Chinese *mok*, *ma'*, *ba chiu* &c.; Jap. *mamiga*, *mey*. *Africa*.—Makua *meto*, *mezo*, Suah *mato*, Kihiau *mesa*, (these E Afr. terms are plural), Kongo *mesa*; Malag. *massa* &c. *Ason*—*mat*, *mata* &c.

19 *Father.*

T. *w.* *pha*, *s.* *pala* (19) Serp. *aba*, Lh. Marm. Chang. *apa*, Lepch. Gur. *abo*, Limb. *amba*, Kir. *ba*, New. *aba*, Mag. *hai*, Sunw. *bave*, Mith. *babu*, Chep. *pa*, Aka *aba*, Abor *babu*, Dhim. Gar. *aba*, Bod. *bipha*; Vindy. *aba*, *baba* &c; Nag. *upa*, *opa*, *apa*, *va*, *taba*;

(14) [Gyarung *tirne*, Manyak *napi*, (Marm) Takpa *ne-blap*, (*blap* is "leaf") Horpa *nyo*]

(15) [Pho-chu *zip*, Gyar. *se'*, Takpa *sa'*]

(17) [Gyar. Takpa *lang-chhen*, Sokpa *lhaho-che*, Horpa *lamo-chhen*.]

(18) [Gyar. *tainyek*, *tamnyek* (Burm.), Takpa *me-long*, Many. *mi*, Horpa *mo* (Chin.)]

(19) [Gyar. *tape*, Many., Takpa, Horpa *apa*.]

Manip. apa, pa, ava, iba, papa, avu, Singph. wa, Burm. phae, Kar. pa, Yum. ha-pua, phai, ba, bo, abha; Mon. bah, bha.

Common in all parts of the World, Mongol, Samoide, Turk., Semitic, Afric. aba; Turk. Tumali baba &c. &c.; Asones. bala, papa, bab, ibpa, pua, pupa &c. &c., [ibu (Manip). "Mother"]

20 Fire.

T. Him. me (20), Him. mi; Aka. ummah, Abor. eme, *Dhim. one; Naga. mi; Manip. mai, chami; Burm. mi, Kar. me, Yuma. mi, me, mai; ? Mon. miot; (See Mon-An.)

Chin. we; Aino. abe, apeli, ambe, Jap. hi; Fin. bi &c.; Afr. — Tumali ibi, ibe, Kuam. mo, Malagas. ale, apo, ala; Ason — Nihlu-Pol. ale api &c.

21 Fish.

T. w. New. nya (21) Murm. tar. nya, Lh. ngva, T. s., Serp. Limb. Kir. nga, Suw. ngau, Gur. tangua, Lep. ngo; Aka. ngay, Abor. engo, Bod. Gar. na; Naga. nga, ngia, nya, angui, angba, kho; Manip. kha, chukha, khai, khi, nga, sauga, thauga; Anam. kha, Mon. ka, Kas. dokha, Nicobar. ka.

Fin. kal, k. l. &c., Samoid. hual, Korea. koki. Asones.-ka, ika, ikan (Mon-Anan)

22 Flower.

T. w. metog, s. mentok, Serp. mendok, Lh. mentog, Murm. men-du, Tiberk. ments. (22)

Galla. doko.

23 Foot.

T. w. rkangpa, s. Serp. kango, Lh. kanglep; Mikir. keng; Manip. kh. ng, ki, akho, ake; Singp. lugong, Kur. khong, kha, Yum. akauk, akok, ya-kong; Mon. chung, dzong, Kamb. chong, An. kang-shun (23)

Drav. kal, Chinese. kha. Asones. — Australian. kana (Drav.); Siamese. chang, Tobi. chem (Mon-Kamb); Indon. kaki &c. (Yuma); Fin. Chukchi, Eskim., Cauc. See Drav.

24 Goat.

T. Lh., Murm. Gur. Mag. ra, (24) Changl. raba; Kol. meram, Urao. era; Naga. roan, ron, Garo. purun, Bodo. burma.

Semitic. aron, Saumali. arre, Danak. illa, Galla. ri.

25 Hair.

a. T. w. skra, s, Murm. kra, (25) Lh. kya; Singph. kara.

Fin. karva, Aino. karmu, Koriak. kirtshini, kirwyt. Cauc. — Lezg. chava; Afr. — Makua. karara, Saumali. dokore, Galla. &c. chegur.

(20), [Tho. chu, Takpa. me', Many. same', Gyar. tami, Horpa. uma' (Aka)].

(21) [Gyar. chu-nygo, Takpa. nya, nga Horpa. hya].

(22) [Many., Takpa. mento, Horpa. meio].

(23) [Tho. chu. jeko (Yuma) Horpa. ko, Sokpa. khoii (Drav.)].

(24) [Takpa. ra].

(25) [Takpa. kra].

Ason.—Cer nkar, Australia-tulkare

b T. s. Serp. tu, Lih. thagi; Kar. tin (See Mon-An.)

Fin ata, at &c. *Asones*, ? Pami tuwa

c T. w. sau, Dhim. mui tu; (25c) ? Kol ub, up.

Fin up, ip; Chin. bo. *Ason*.—bok, but, bu &c (probably Dravir.)

26 Hand.

T. w. lag pa, (25) s. Serp. lango, Lh. lappa, Lep. kaliek, New pa lahé, Gur. lopta, Aha lak, Abor nag; Naga dak, chuk, yak; Singh lotu Bufai. w. lak, s. let.

Turkish hik, Ost. lagol. *Ason*.—Indon. lungan (generally "arni"), Sunda lungan, Pol. ringa, lina.

27 Head.

T. w. ego, s. Serp. go, Lh. gutok; Naga kbro, taku, Manip. kok, kai, kau, akao; Burm. ghaung, lu-gu, Kar. kho; Nicolai. kol. (27)

Ason.—Simang. Bin. kai, kue, kai, (Manip. Nicol.), Baliguni ko, Batan oglo. Jap. kaebu, Kam. kabbel; Aust. kabera; Cauc.—Circ. kah, aka &c; Iranian kapula, caput, &c

b Gur. kra, Mishi. mkura, Bod. khoro, Manip. takolok (Tib. kra "hair"); Yum. lu, blu; ? Kas. kli.

Cauc.—korte &c. Iranian kala, ceranium &c. *Asones*.—Sim. kala, Aru guli, Born. takolah, Mal. "seul" tankora.

28 Hog.

T. w. phag, s. phakpa, Serp. phak, (28) Lh. phagpo, Chap. plak, New pha, Suow. pu; Mag. wak (? Aka. kukpa, Abor. rek, Goro vak; Naga vak, ak, nak, thevo, thavo; Manip. bok. habak, avak, wok, hak, ok, Singp. wa, Burm. w. waki, s. wet, Yum. wok, wet, wut.

Malayal. purki, Iran. pig, hog, porcus &c; Cauc. hake, khuka, ka. Ikaka &c. (Aka. kuk-pa) *Asones*.—Batan. bagu, Sirawi. kapot, (Manip. habak), Pol. puuku.

29 Horn.

T. w. ra, (29) s. rajo, Lh. rou; Murm. rhu, Gur. ru, Suow. guro; Lepch. aroug, Chap. rong, Chang. warong; Abor. arang, Miso. rin, Dhim. dang, Goro. karong, Bodu. gang; Kol. daring, ding. Ur. marag, Male. murg; Naga. rong, wong; Singp. rung; Men. kreang, greang, Kas. ka reng.

30 Horse.

T. w. rta, s, Serp. Lh. Mur. ta (30), Yumatsa, sha, Kar. kibai khe;

Turk. ut, ut, Yenik. kut, kus &c. [Hence kuda, ghora, &c.] Arm. tsi, Cauc. shu, tshu, &c. Sam. djuka, tschinde; Sansk. ashwa &c.

(25c) [Takpa pu, Horpa spu, Many. mui (Dhim.)]

(26) [Gyar. tayah (Naga), Many. tep-cho', Takpa la, Horpa lha].

(27) [Gyar. taku, (Nag.) Takpa gok-ti (Manip.) Horpa gho].

(28) [Poh-cho pi, Manyak wah, Takpa pha, (Newar) Horpa vah].

(29) [Poh-cho tak, Gyar. taru, Many. ruba, Takpa roba, Horpa kura bo]

(30) [Takpa te'].

31 *House.*

a. T. *w.* Lh. khyim, Kir. khim, Murm. dhim, Sunw. khi, Gur. tin, Limb. him, Serp. kangba; Abor ekum; Naga hum, ham; Manip. yim, yin, shim, shin, tsun, chin; New. ehhen, Burm. im, eing, Kar. hi, gueng, Yuma ing, eing, um; Magar yum; Mon he, Kas? root ini, Kuki teng. (31)

(Samoede ma, me, men &c. ?) *Ason.*—Tobi yim, Mille im, Sunda ima, Sav. emu; Indon. ruua, huma.

b. T. *s.* nang; Mrung nao, Bod. nou, noo, no, Anam dang, na, ya, nya, ngua.

Cauc. unnelh. *Ason.*—Lamp nou (Bodo).

32 *Iron.*

T. *w.* lehags, *s.* Serp. Lh. chhya; Naga hache, hatse; Mon pasoe, pathway. (32)

Koreg soi, suy, Samoel yese, bese, basa, &c.; Cauc. achik, icha, ask &c.—; Iranian aes, eisen, ayas; *Ason.*—Indon. base (Mon pasoe), bosi, basi, besi, bisi &c.

33 *Leaf.*

a. T. *w.* loma, Lh. dama, Lep. lop (33) Murm. New. lapte; Gur. lau, Mag. lha, New. hau; Abor anne, Mish. mah, Dhim. lhava, Bod. lai; Manip. na, thi-na, thing-na, sing-na ("tree-leaf"), Singp. Jili lap, Burma rwak, yuet, Kar. la, Yuma la-kang, An. la; (Drav. elei, ela &c.)

Fin. lopa, lopat, lopta &c. (Tib. Murmi &c.); Malagas. ravi; *Ason.*—Erub. luan, Bima rupa, Savo rau, Pol. lau, ran, Indon. daun, raun, Sumatra, Phillip. botong, Mal. &c. lai, a segregative used in enumerating flat objects, as cloths, sheets of paper &c.

b. Tib. *s.* hyoma, iyowe, Serp. hyomap, Lh. syoma, New. hau.

Chin. bio.

34 *Light.*

a. T. *w.* hod, Limb. ot; Naga oitike. (34)

Turk. syod.

b. T. *s.* hwe, eu, Serp. Lh. ew, Singp. thoi, Jili thwo.

35 *Man.*

T. Him mi, Abor ami, (35) Mish. name, Garo mira; Naga mi, ami, theme, thema; Manip. mi, tham, mu, samu, mai, chamai; Yuma ku-mi.

Fin. mios, mis, mes, pioa; Turk. bai; Zend memio; Afr.—Galla mi, ma, Manding. mau. *Ason.*—Indon. mama.

36 *Monkey.*

a. T. *w.* sprebu, (36 *a*) Lh. pya; Aka lebe, Abor sibie; Naga veh;

(31) [Tho-chu kih (Sunw.) Gyar. chhem, Takpa khem].

(32) [Tho-chu sormo, Gyar. shom, Horia chu, Muni. shi].

(33) [Horp. bada', Takpa bkap (New., Dhim)].

(34) [Tho-chu nih, Horp. spho (Turk.), Muni. wu', Takpa wot,

Mru watai].

(35) [Gyar. tirmi (Nag. Manip.), Takp. mi'].

(36 *a*) [Gyar. shepri, Takp. pra].

Singp. *we*, Jili *tawe*, Kar. *ta-aoe*.

Ason.—Indon. ? brok, belo, ubal.

b. T. *s. tyu*. (36 b)

37 Moon.

T. *w. zlava*, *s. dawa*, (37) Serp. *oula*, Lh. *dau*, Lepch. *lawa*, Limb. *laca*, Kir. *la diene*, Murm. *lhaui*, Changlo *lani*, New India. Gur. *lu ngi*, Sanw. *la tö si*, Chep. *lame*, Aka *pala*, Ah. *poto*, Mish. *malua*; Naga *da*, Jeta. *lwa*, *yita*, *lelu*, *le*; Manip. *lha*, *tangla*; Singp. *Jili sata*, Burm. Kar. *la*, Yum. *lo*, *slu*, *hla-pa*, *tu*; An. *klang*, Lau *luu*.

Fin *mano*, Korea *ora*, Samoid *iri*, *ireda* &c., Chukch. *iraluk*; Iran. *luna*, moon, month &c. Afr. —Danak. *hera*, Felap *feh in*, Malagas. *vula*, *vulan*. *Ason*.—Austr. *pala*; Indon. Pol. *vola*, *bula*, *bulan* &c. (through Malagas.)

38 Mother.

T. Him. *ama*, *amo*, *am*, *ma*, *uang*, *amai*, (38) Mish. *namu*; Dhim. Gur. *ama*, Bod. *hima*; Burm. *ami*, Kar. *mo*, M'rang. *amo*; Kas. *kami*, Kamb. *mi*, An. *me*.

Nearly universal, e. g. Yukahiri, Yenisei, Samoid, Fin, *ama*; Africa, Malagas., *ama*; Asonesia, *amó*, *ina* &c.

39 Mountain.

a. T. Serp. *ri*, Aka *nodi*, Daphla *mlodi*, Abor *adi*; Dhim. *ra*; Yuma. *lai*, *mu-ra*; Lau. *loi*, *noi*, *doi*; Lhop. *rouer*; Manip. *mlong*, *kalong*, *khlung*; Kar. *koe long*, Yum. *klang*, *klang*, *slang*; ? Mag. Sanw. *danda*.

Chin. *lia*, Tanguis *alia*, *uro*, *ura*; Mong. *ala*, *ila*, Fin. *ur*, *Ason*.—

Indon. *luloh*, *leleh*, *bada*, *lele*, *alunga*, *oluna*, *gunong* (Manip. *ka-long*).
b. T. *s.* (W. Tib.) *dak*, Lepch. *rok*, Milch. *dokang*, Tiberk. *dung-kang*, Chamang. *douk*, Linbu. *tok-song*; Vale. *toke*, Gond. *dongur*; Jili. *satoug*, Burm. *tong*, *taung*.

Turk. *tak*, *tag*, *dag*, *tau* &c., Japan. *dake*, Aino. *tapkub*. *Ason*.—Indon. *heak*, ? Erub. *talik* [Viti. *toka-tau*, but here *toka* probably means "fixed"]. Chuang. solo. *Rotuma*.

40 Month.

T., Serp. Lh. *kha*, Milch. *kagang*, Chamang. *kahk*; Aka. *gam*, Mish. *teku*; Bodo. *kagha*, *khonga*; Angamu. *Naga ata*; Kar. *kho*, Lung-*ke aka*, Kum. *uk-kha*.

Chin. *khau*, *han*; Yenisei. *ko*, *gou*, *khau*; Sam. *aagan*, *ak*, *agma*, *ake*; Turk. *akse*, *agus*, &c.; Japan. *kosi*, Kanch. *kasha*; Cauc. *baku*; Semitic. *kha* (*khara*, *Mahra*); Mongol. *kargo*, *gurga*. *Ason*.—Austr. *ka*, *karaka* (Mongol); Jav. *chikam* (Aka).

41 Mosquito

a. T. *w. sanbu*, *meburings*; Abor. *sunggu*; ? Kol. *bhu-sundi*, *bhu sandi*; Manip. *sangsau*, *hachwang*, *kachang*; Kumi. *chang-rang*. *Ason*, Kaili. *sani*, Murray I. *souney*; Bima. *samulan* (Kumi).

b. T. *s. sye-dounga*, Lh. *zen-dong*, Him. *lam* (with other roots joins

(36 b) [Gyar. *ti*].

(37) [Gur. *tsile*, *chile* (Nag. *le*, Many. *lho*, Takp. *le*)].

(38) [Horp. Many. Takp. *ama*, Gyar. *tomo*].

ad); Aka tarang; Naga mangdong; Kumi chang-rang. *Asen*—Sas. tutang, But, tirangkas.

42 Name.

T. Hin ming, min; Abor amin, Mish. amung; Dhim ming, Bod. Gar. mang; Naga min. man, *tenung*; Manip. ming, armin, amin, mi, amang; Singo ming, Jili taming, Burma. amin, ami, Kar. mi, meng, Yum aming, amun.

Common.

43 Night.

T. w. mishanno, s. chenno, Serp. chemo, Limb. kusen, sen-jik; Dhim. shi-shing; Naga asang-di (Limbu); Manip. rasa, rosa; Singh. sana, Jili sanap.

Turk. achsham; Mong. so, chei, suni; Yenis sai; Ainosi, asira; Jap. joru, Fin ose; Semitic asar, azar. (Mar. Ghar.); Afr.—Malagasi asine; *Asen*.—Balig. sangana, Tid. singi bongi, Mang. chan.

44 Oil.

a. T. w. hbrumar, marhu, Bhut. mahhu.

Japan abra; ? Kilimani, makura.

b. F. s. Serp. nam, Lap. nara, Limb. ninge, mingay; Kol sunum; Naga manga; Singh. Jili, Lau nam-man.

Asen.—Dis. nana, Pol. faugo, pani; Indon. miniak, minako, mina (Limbu, Naga).

45 Plantain.

T. s. Lh. ngala, Kir. ngak-si; Naga ngo, *mongo*, mango; Manip. ngo-shi, nga-chang; Singp. *lango*, Jili *khungo*.

Asen.—The Indon. pisang may be an Ultraindian term, pi-sang (Comp. nga-chang &c.)

46 River.

T. w. gtsangpo, s. changpo, Serp. hyung, Lhop chin kyong, Lepel, ong kyong, Limb. wahong, Mar. syong, Kir. hong-ku, Gur. khwong; Mishmi tsalo; Naga joan, shoa, swokha; Manip. shingga; Anam song, sung, som.

Pashtu sean, sin, sint (hence Sindu, Hindu, Indus, Scinde &c.); Ugr. shor, shur; Mongol chun, usun; Turk. usun, su, sug, yai-su, dsulga &c.; Ugr. ivaga, yugan &c.; Sam. yacha &c.; Ug. yo, yozu &c.; Korea ha syu. *Asen*.—Indon. sungai, sungai, sungu &c.; Cel. salo.

47 Road.

T. Hin. lam. New lon, Sunw. la; Aka lam-tau, Ah lam-be, Mish. ailam; Dhim. dama, Bod. lama, Gar. lam; Naga lam, uuglan, leuang; Singp. lam. Jili tanglong, Burma. lam. lan, Yum lam, lang; Kas. lanti, Mon. dau, ga-lan, An. dang, Lau tang.

Chin. lu, lau; Gara. orem, Mahra. horom; Afr.—Malagasi lalambe, Suahili jira, Sech. seli, *Asen*.—Indon. lorong, lorong, balan, lara &c. lango, turang, taluna, dalang, dala, jolo, jalan, Pol. sala, hala, haranni, ara.

48 *Salt.*

T. w. tsha, s. Serp. Lh. chha, Mur. Gur. chacha, Mag. cha, New. chhi; Blim. dase, Bod. shyung kare, Gar. syang; Naga matsa, metsa, mitse, machi, sum, hum; Manip. ntsu, wachi, mti, ti, nchi, matai, kasam, thum; Singp. tsun, Jili chum, Burm. chlu, tsha, Kar. tsha, Yum. ma-tsi, shete.

Japan shiro; Ugr. sow, sol, sula, sek, so, &c; Samoide si, sir, sak &c; Cane. shug; Indo-Gur. sal, salz, sout, salt &c.; *Afr.*—Galla usu, Danak assebo, Malagasira (Jap. Sam.) *Ason*—Indon. sin, asi, si-yok, sien, asin, asin, siru (Malagasi), mase (Manip. machi), musikh, masin, penasin, mengahi Pol. uhane, masima, masi.

49 *Sk'n.*

T. w. pagspa s. pagpa; [? Bolo bigur, Garo bigil]; Naga takap, (inv); Jih. mapuk; Singp. phi, Kar. phi, Yum. moe-pik; ? Kamb. si-bek

Chinese, phi, phue. *Ason*.—Austr. bokai, bakai.

50 *Sky.*

T. w. nam kha, s. Serp. Lh. nam, Kir. nam-cho; Naga aning, anung. Samoid, —nani, nam, nob, nyon; Ugr. in. ninak, inniyn, numma, nomen, nair; Kashmir nab; Ason.—Timor neno, Kissa onga [See Sun, Day.]

51 *Snake.*

T. w. shrul, s. deu, Serp. dral, Lep. heu, Mag. bul, Sunw. hu-sa, Gur. bhu-gari; aka tabuk, Abor. tobi, Mish. tobu, Bod. jibou, Gur. dupu; Kol. bing; Naga pu, phala, purr, thofa, ahu; Manip. marun, pharu, phru, phrai, mari, pharan, phral, lil, urui; Singp. la-u, Jili. tapu; Burm. urwe, myue, Yum. rul, rui, pui, pwa, marui; An. ran.

Malagasi bibi; Kwamam, oria; Bengali uraga, Hind. Pash. mar; *Ason*.—Tilang. bio (Lepch. Yuma) N. Austral. ambit; Indon. ular, ula, orei, alhin &c.

52 *Star.*

T. w. skarma, (52) s. Serp. karma, Lh. kam, Mur. kar-chin, Gur. tar-gya; Ak. takar, Abor. tekak; Manip. tikrou; Singp. sagan, Jil. sakan, Burm. kre, kee.

Ugrian, —chur (Ost); Korink. ogor; Yenes. kaken; Korea. kurome; Mong. odon; Iranian. tara, dara, staranun, astrum, stella, star &c.; *Afr.*—Suahili tara; *Ason*.—Kayun. kraning, Viti, kalo, Indon. entara, mlara, dala, etah, tuwar, war &c. (war is probably a different root, being found in New Guinea, Torres St., Australia &c., tara is probably of recent Arian origin.)

53 *Stone.*

T. w. rulo, s. Serp. Lh. do; (? Gond. tougi;) Anam. da.

Korea. tu; Ost. to; Other Ugr. lung, ko, ku, kiwi &c. ? Malagasi vatu.

(52) [Horp. sgre, Many. kre, Takp. karma].

54 *Sun*.

T. *nyima* (54); ? Kol *singi* (See "Day").

55 *Tiger*.

T. *w stag*, *s. tak*, (55) Serp *jik*, Lh. *tah*; Yuma *tchak-ke*, *tuk-koe*, *tagain*.

Iran. *tigris* &c.

56 *Tooth*.

T. Serp. Lh *so*, (56) Tiberk *soa*; Murm. *swa*, New. *wa*, Gur *sak*, Mag. *aya*, Changio *shia*; Nag. *pa*, Manip *awa*, *ha*, *hu*; Burm *swa*, *thwa*. Japan *cha*, *ha*, *fa*; Ugr. *pu*, *hui* &c.; Semitic *sin*; Turk. *tis*, *tish* &c., Tungus. *it*; Afr. — Malag. *mifi*, *nifo*. *Ason*. — Indon. *yus*, *iti*, *ngisi*, *isi*, *nisik*, *niso*, *nihlo*, *nifo* &c. (Malag.)

57 *Tree*.

T. *w. hon-shing*, *s shing-dong*, *tam*, (57) Serp. *dongo*, Mur. *dhoing*. Lh. *shiaz*, Tiberk *Milch botung*, Limb. Mag. *sing*, Kir. *sang-tung*, Gur. *sin-du*, New *sima*; Aka *sangma*, Ab. *sine*, Mish *masang*; Dhim *shing*; Naga, *sang-tung*, *san-tung*, *sun-dong*, *si*; Manip. *thing-bang*, *sing-bang*, *thing-kang*, *thung-rong*, *asing*, *hing-tong* (Pib.), *hing-bang*; Kar. *theng*, *thi*, Yem. *ting*, *teing*; Kas. *ka ding*, Lau. *ton*, *tan*.

Chinese *shi*, *sha*, *ch'hiu*, *chang* &c.; Yenes. *hochon*; Sam. *cha*; Ug. *suy* &c.; Cacc. *che*, *she*; Kamch. *uthun*, *utun*, *anda*; *Ason* — Lamp. *Land batang*; Phil. *dutang*, *Sunda tang-kal*, (Mal. &c. *tang-kai* "atom").

58 *Village*.

a. T. *w yul tsho*, *s. thong*, (58 a) Kir. *teng*, Chang. *dung*; Abor. *do-lung*, Mish. *matung*; Gar. *song*; Naga. *ting*, *ting-khua*, *ching*.

b. T. *w yul tsho*, Serp. *yul*; (58 b) Naga. *yum*, *ayim*, *yam*; Maring. *yul*, *you*.

59 *Water*.

T. Serp. Lh. *chhu*, (59) Limb. *chua*, Kir. *chawa*, Gur. *kyu*, Sunw. *pankhu*; Naga. *tsu*, *tsu*, *zu*, *atsu*, *tu*; Manip. *aichu*, *tu*, *tundu* [Gang. *Ultr ji*, *si*, *ti*, *di*, *ri*, *tui* &c. Mon. *dai*].

Chinese, *chui*, *shui*, *sui* &c.; Jap. *mizu* &c.; Samoid. *tui*, *itu*, Ugr. *uit*, *ute*, *wesi*; Turk. *shiu*, *su* &c.; Mong. *usu*, *usun*; *Ason*. — *bisan*, *mazi*, *meze*, *miazi* &c. *Ason*. — Indon. *chie*.

60 *Yam*.

T. *w. dona*, *s thoma*, (60) Serp. *dhon*, Murm. *teme*, Gar. *taya*; Bodo. *Mrung tha*; ? Kol. *da sang*.

Chinese *dua tu*, *tua chu*; *Ason*. — Indon. *uda*, New Cal. *uti*.

(54) [Gyar. *kini*, Many. *nyima*, Horpa. *nga*].

(55) [Horp. *stak*, Takpa. *tes*].

(56) [Thochi. *swe*, Sokpa. *syu-chi*, Horpa. *syu*, Gyar. *tiswe*, Takpa. *wa*, Many. *phwi*].

(57) [Gyar. *shi*, Many. *sapo*, Tapk. *sheng-dong*].

(58 a) [Gyam. *twang-cha*].

(58 b) [Takpa. *yu*, Many. *hu*, ? Gyar. *wo-khyu*, *tu-khyu*].

(59) [Thochu. *chah*, Gyar. *tichi*, Takpa. *chhi*, Many. *dya*, Gyar. *shui* (Chin.)].

(60) [Gyar. *seten*].

APPENDIX TO CHAP. VI. OF PART II.

E.

VEGABLES NON-BHOTIAN IN ROOT OR FORM COMMON TO THE NORTH
ULTRAINDIAN, HIMALAYAN, AND MIDDLE GANGETIC LANGUAGES. *

1 Air.

a. Changlo *ridi*, Akadasi, Yuma *ñli*, *kali*, &c. Burm. *le*, Kar, *hli*, *khli*. (1 *a*).

Fin *ilana*, *ilan*. [*ila*, *shana*, *shen* &c. "Life"]. Wog. *ili* [Ost. *ili*, *wula* to, Mag. *elot*, "Life"]. Turk *mail*, *chil*, *ti'amp* "Wind". Yakahiri *li*, Aino *vera*, Turk *il*, *eil*, *chil*, *sil* &c.; Mahrah *ora*, Gura *iro*, Arab. *re* &c).—Ason.—Sumba *riu*; "Wind", Mandh. *iri*, Ut. *lauri*; Celeb. *puire*, *pori*, &c.; Aust. *mailo wiri-nguma* &c.; Pol. *savili*. [See D 1]

b. Limbu *samit*, *shami*, Lepch. *sagmat* Mag. *umau*, Sunw. *phase*, Misch *hush*, Ab. *asar*; Manip. *nang-il*, Kholi. *nang-li*, Marani *nhid*, Lah. *masi*, N. T. *masu*, C. T. *mashu*, Maring *marthi*; Nag. *rang-che*. (1 *b*).

* Mong. *achur*, *ahur*, *shr*, Tib. *hur* (wind) [See B. Mon-An. The Bina *sime* appears to be connected with the Limbu *shami*].

2 Ant.

a. Sern. *rhanma*, Abor-H. *micoag*, Mish. *arung*, Jili *tsang-lang*, Loh. *chaling*, N. T. *lang-za*, Kholi *miling*, Mar. *phayung*; Yuma *pa-lang*, *maling*, *pa-lein-tsa* [Drav. *Akon*—See Drav. Some of the Asonesian words are immediate derivatives from Ultraindian. Thus the Maring *miling* is found in the Bagis and Dere *biri*, Kaud. *bere* and with a final *s* in Madur., Baw. *bilie*, but this may involve a separate root for Simang *has let* and Pand *la-pu*. The Abor *micoag* and Misch *arung* render it probable that the Tibetan *rag*, Sunw. *rag-anachi* and Burman *pa-rwah-chhit* or *pa-yuot-sik* present the same root]

b. Gur. *chli*, Sunw. *rag-muchi* (*rag*, Tib.); Marmi *yen-ri*, Bod. *ka-za* brai, Ahoim *nyuchu*, Deoria Ch. *chimchi*; Nag. *mucha*, *muthang*, tik-*sa*, tik-*ha*, *hacha*, hang-*zah*, tsip *chak* &c.; Manip. D. *lang-za*, *chamcha*, kak-*cheng*, utenup, utung. *tanpin*, *ma-ang-pwi*, *ching-kha*; Yuma *mutsi*, *pa-lein-tsa*, Burm *par-wak-chit*; (Drav. *china*, *pijin*)

c. Lepch. *tak-phyal*, Limb. *sak-chiem-ba*, Kir. *sa-chuk-va*, Nag. *tik-sa*, tsip-*chak*; Manip. *kak-cheng*.

6 Boat

Gurung *pla-va*; Kumi *plung* [See Tib-Ult. and Drav. (a)].

* In App. E the roots, not the derivatives, are retained. I have substituted "non-Bhotian" for "non-Tibetan", as Mr. Hodgson's East and North Tibetan vocabularies now show that several of the vegetables are Tibetan.

(1 *a*) [Gyar., Tobog-lhu ta-R.]

(1 *b*) [Thochu *mozyu* (Manipuri D. *masu* &c.)]

7 *Bone.*

* *Starung nagri*; *Garo gning, herang, Maring hwa* &c. [See Tibeto-Ulr.]

8 *Buffaloe.*

a. Limb. *sawet*, Kir. *Sanwa*. *Saw* and *san* are probably the root used for "Cow" (b), — *et* and *wa* being def. postfixes.

b. New. *me*; Deor. Ch. *me*, Asam *moh* ("Cow" Murm. *mha, mih, Sunw. bi* Burm. *me*.) (8b).

c. Aka *men-duk*, Abor *men-zek, men-jek, men-jeg*; Naga *teh*.

"Cow" Ch. *ta-yu*, Turk. *inek*; ? Fin trans. *Ason*.—"Cow" Dis. *daka*.

9 *Cat.*

Yuma *min boi*, Newar *bhou* (9).

10 *Cow.*

a. Sunw. *bi*, Limb. *bit, yapi*, Kir. *pit, Lepch. bih*; Dhimal *pia*, Karen *hpi, ting*, Bengali *ga-bhi* (Drav. *poi, peta* &c., and see B, Mon.—An. and D, Tib.—Ulr.) (10 a).

b. New *sa*, Aka *shye*, Abor *san*; Mishmi *ma-tso-kru*; Singph. *kan-su*; Gar. *mashu*, Bod. *mashu-go*; Naga *masu, masi, masi, mahu* &c.; Kasm. *ka-ma-sa*; Yuma *shya, tra, toho, ma-chou* ("Buffaloe" Tib., Ulr.—Semitic). (10 b).

Chin. *suu gu, shu gau* &c. Ost. *mos, Perio mos, mus, mys, Wag. misya*. Lat. *bos*.—Af. Sumali, Galla, Bishari &c. *sauh, suu, osha*. The Ostiak *chosy*, Kamchat. *kusha*, Lap. *husu, kos*, Shangalla *kusa*, appear to combine the sibilant root with a prefix or another root. Comp. *tingpho kunsu*.

c. Gar. *myau*, Mur. *mha*. These forms are probably related to a. See also "Buffaloe" b.

d. Mag. *nhet*. *Nhet* is possibly the Turk. *inek*. (10 d).

11 *Crow.*

Aka *pak*, Ab. *piyag, piak, puag*, Naga *vakha*, Yuma *uah, wut*, S. Teng. *awak*, Maring *ak*, Marim *chag-hak*, (11).

Ason.—Tag. *awak*, Iloko *wak*.

12 *Day.*

a. Limb. *len-dik*, Kir. *len*, (12) Abor *longe*, Songp. *kakkan*, Mar. *lan-la* &c.

Ug. *lua*.

(8 b) [Manyak *ding mi*]

(9) [Takpa *syim-bu*]

(10 a) [Mang. *wo mi*]

(10 b) [Sokpa *sa lo*, Thochu, "bull", *zyah* (Yuma "cow" *shya*)].

(10 d) [Gyar *nye nye*, Gyami *nyen, nen*]

(11) [Takpa *akpo*, (Maring *ak*), Thochu. *nyag-wo*]

(12 a) [Takpa *nyen ti* (Limb. *len dik*). The Horpa *nye.le* appears to show that *nyen, len*, is the Tibetan *nye* with an *n* postfix].

b. Magar nam-sin, Suwa. na-thi, Tiberk. *zhang-ma*, Singphu ning-thai, Nag. *uanga*, tsing. Deor. Ch. *sanja*. Langkle sun Manip. *ngasun*, *masung*, asun Rakh "Sun" *ishun*, Burm. *tscheng*, *chuna*. Nancow. *han*, Bod. *shyan*, Garo *san*, *rasan*, Kol *sing*. The word is radically "sun" in most of these languages.

Ug. *shan-du*, Tangusian. "Sun", *shan*, Ost. *siunk*, Semitic *sham*, *shams* &c.

15 Earth.

a. Limb. *kham*, Kir. *ba-hha*, Suwa. *kha-pi* (? Tib. New. *cha*, Tib. *sa*) Singl. *nya* Jili taka (whence probably the Naga *katok*).

b. Lepel. *phat*, Manip. *lai-pak*. (15 a).

16 Egg.

Dhim *tui*, Naga *ati*, Limb. *thin*, Kir. *nding*, Changl. *go-tham*, Tiberk. *tum*, Dliith. *tui*, Bodo *don-doi*, Gar. *ton-chi*, Singphu *ndi*, Burm. *a*, Kar. *di*, Milchanang *li*, *lich*, Asam *koni*, Yuma *wati*, *adai*, *atui*, Nag. *ni*, *oti*, *ura*, *utsa*, *ause*, *hadsu*, Manip. *nroi-dai*, *maka-tui*, *hachu*, *atu*, *artu*, *wayui*. (16).

17 Elephant.

a. Newar, Chepang *kiti*, Suwa *so da*, Abor-Miri *siti*, *sita*, Manip. *ka-sui*, *sui*, Kar. *ka-tsha*, Nag. *suti*, *shiti*, *suti*, *tsu* (see Tib.-Ult.)

20 Fire.

Garo *wol*, *vor*, Manip. *wan*, *taar*, Singph. *wan*, Nag. *wun*, (Mon.-An.—"Sun", "Sky".)

22 Flower.

a. Limb. *phung*, Kir. *hung-wai*, Suwa. *phu*, New. *swong*, Aka *pung*, Abor. *apun*, Nag. *tuben*, *chabun*, *uhopa*, *popu* &c. Manip. D. *abun*, *won*, *pie*, Burm. *pan*, Kar. *hpa*, Guma *pa*, *par*, *pupa*, Deor Ch. *iba*, Garo *par*, Bod. *bihar*; Drav. *pu*, *pupa* &c.

Ch. *fu*, *hwa* &c. Japan *fana*. Semitic *ful*. Af.—Bagnon *gueson* Felup *ba fan*, Malag. *vong*, *rono*, *vuna* &c. Ason.—com. *fanga*, *banga* &c. ["Flower", is not included in Klaproth's Scythic vocabularies.]

b. Mag. *sar*, Lep. *rip*, Chep. *ro*, Manip. *par*, *rai*, *lai*, *cha-ra pen* (*pan* &c. in other dialects) Nag. *maru*, *nulong* (? Drav.)

23 Foot.

a. Miloh *bung*, Tiberk. *bung-khat* Manip. *wang*, Limbu *lang dophe* (Uraon *dape*) Changlo *bi*, Nag. *uphi*, Bodo *yapha*, Maram, Songpo *phas*, Kor. *chapi*.

pa is a common Asiatic root, but in most formations it takes final *r*, *u*, *d*, *t*, *s*, &c.; e. g. Korea *par*, Kash. *phaer*, Sindh. *per*, Hind. *pair*, Sansk. *pada*, *pad*, Europ. *pes*, *pado*, *foot* &c.; Beng. *pa*, *paya*, Semitic *pa'in*, *pa'an*. Af.—Malag. *pe*, *fe*, Galla *fauu*. Ason.—Pol. *wai*, *war*, *pae* (Manip.), Mak. *bangkang*, Sol. *opat*.

(15 a) [Horp. *kcha*].

(16) [Gyar. *kitan*, Gyami *chi-tun*].

- b. Murm. *bale*. New. *pali*. Gur. *bhale*. Abor M. *ale*. Mag. *mihil*.
 c. Sunw. *khweh*. Kir. *ukharo*. Burm. *khre*, *khye*, Kor. *khodu*, Tiberk.
bung khut (Drav.)
 d. Dhimal *khokoi*, Kumi *akok*, *akauk*, (Tib. Ult.)

24 Goat.

- a. Aka *shobam*, Abor *shoben*; [Dhim *eecha*.] Nag. *nabung*, *na*.
bong, Manip. *hameng* [See Mon An.]
 (not included in Klaproth's Atlas).
Af Malag. *beng*, *umby*, Woloff *biente*.
Ason—Indon. *bembe*, *himi*, *embe*, *ambo*, *imbe* &c., *kabimbi*, *kambing*, &c.
 b. Sunw. *chursye*, New. *chole*, Lep. *saur*, *sarehru*, Chepaug *micha*,
 Dhimal *eecha*, Songpu *zyu* (Hindhi *chelo* Hind).

25 Hair.

- a. Lep. *achom*, Mag. *chham*, Sunw. *chang*, New. *song*, Changlo
cham, Manip. *sum*, *tham*, *kosen*, Bongju *som*, Kuk. *sum*, Burm. *chhan*-
bang, Yuma *tsam*, *tsang*, *chang* &c., Tongg-thu *athawon*. The Mon-
 Anam *thwat*, *soh*, *tau* is probably the same root.

Mong. *usun*, *usu*, *ehor-chun*, Turk *asim*. *Ason*—Tobi *chim*.
 (The numerous other affinities of Tobi, Pelew &c. with the Ultraiidian
 languages make it evident that *chim* is of Ultraiidian origin and pro-
 bable that the Turkish form once existed in the Ultraiidian province).

- b. Kir. *moa*, Gur. *moi* Chepaug *min*, Dhimal *mui tu* (? Hind.
mu), Bod *khanai*, khomon Garo *kaman*, Naga *min*, Burm. *chibing*.
 c. Nag. *kho*, *ko*, [? Bod. *khanai*, *khoman*, Gar *ka-man* ('head').]

26 Hand.

Mileh. *got*, *god*, (Changl *godang*), Kir. *chuñu-phe-ma*, ("foot" *ukha-*
ro), Limb *huk-taphe* (foot *lung-daphe*), Mag. *hut* pink, Chepaug *hut-*
pa, Nag *chak*, *yak* Manip. D. *kot*, *kut*, *hut* &c. Birua *kohut*, *kohot*.
 A. Ugr. *kat*, *kalu*, *kasi*, *ket*, *kit* &c. Sam. *hatte* &c. Indon. Europ. *huth*,
hand &c.

27 Head.

- a. Lepch. *athiak*, Limb *thag-ek*, Kar. *tang*, Mar. *thobo*, Abor *mi-*
tuk, *tuku*, Nag. *teh*. Silong *atak*

Chin *thau kha*. Sansk. *mastaka*, Zend *wedege*. *Af*.—Tum. *adg*.
Ason.—Indon. *otak* &c.

- b. New. *chhon*, Burm. *khong*. Nag. *khang*, *kho* &c., Gar. *duham*, *shi-*
kam, Jili *nggum*

- c. Gar. *kra* Bod. *khora*, Mish *mkura* ("Hair," Tib. *kra*, Singp.
kura).

- d. Mag. *mitalu*, Manip. *lu*, *alsu*.

- e. Tiberk *pisha*, Sunw. *piya*, Manip. *pi*, *api*, *chapi* &c.
 Turk *push*.

- f. Abor *dum-pong*, Aka *dum-pa*, Singph. *bong*, Deor. Ch. *gubong*.

28 Hog.

- a. Murm. *dhwa*, *thua*, Kar. *tho*.

- Korea *tu*, *tot*, Ch. *tu*, *du*, Ug. *tua*, *tuwe*,

- b. Gur. *tizi*, Mish. *balli*.

30 Horse.

Milch. rang, New sala, Chepang srang, Singp. kamrang, Burm. mrang, myen, Lungkhe rang, Kol sudam.

Ug lo, lu, log, ; Ason.—Ladon. jaran, jara, dala, ndala, nyarang.

c. Mong. Tangus, Korea maurin, moron &c.

31 House.

a. Lepch li ; ? Manip in, Yuma ing. (Tib.)

b. Mur. yum, Manip. yim, Abor ehun (Tib.)

c. New chhen, Manip. sung, Dhim. cha, Singphonta, Manip kai, shia &c. (Tib.)

31 Iron.

a. Milch. pron, runa, run. Lepch. panjing, Limb phenji, Kir Mag. Chepang phalam, Murm phai, Gur pai, Sunw wa ukli, Uraon pauna, Jili taphi, Singph mpri, Maram kapha.

b. New ae (? Kas nar.

c. Lepch pan jing, Nag jian, jan, yin, yen, &c. Deor Ch. sung, Burm san, than, Mishmi si, Manip ntan, thin, tin, thir, thiar, Aka kakdhar, Kumi hadang Dhim chit, Bod. chur, chor, Garo shur, shil Tangus shelle, zhilla, solo &c.

Af.—Suah. chunga Tigre achin.

32 Leaf.

a. Kir uhava, Sunw sapha, nahar, Nag tuwa &c. Burm riwak, Lau bai (see M A)

b. Lepcha lop, Singph lap, Nag nyap, Tib lama, Dhim lava.

c. Ahom anze, Naga am, Mishim nah, Manip na, thina, panu. &c.

33 Light.

a. Lep. aom, Changlo ngum, Sunw. hango, Aka hang tepa Chep. angha (? Bhut dam.)

b. Lep. achur, Limb thoru, (? Bod. churang); (Tib. hur "wind", achur Mongol "air").

c. New jala, Murm. ajalo.

34 Man.

a. Lepch. maro, Kir. mana, New mana, Sunw. muru, Aka bangna, Mag. bharmi, Chep. pur-si. Is the Mur of Murm not the same word? mi is Tibetan. (Burm lu, Drav. Vind. horo, ala male, orauon &c.

Pashtu Sindh. maru &c. &c. a wide spread root.

b. New mijang (musc) Dhim. diang, Changlo? songo, Jili nsang, Naga nye sung, mesung, sauniak, Deor Ch. mosi, S Tangkh pasa, Kyo mashi

Ug. chum, hum, Korea, sana; shanan Malay jan-tan.

36 Monkey.

a. Sunw. moro ("Man", 'muru) Mish. tamrm.

b. Gur tingu, Chep. yuth, Burm myant, Yuma yang, Manip: yong, kozyong, nayong, hayong, ying khago, Dhim. nhoga.

38 *Mother.*

Aka *anc*, Abor. *nane*, Singph. *nu*, Nag. *anu*, *onu*, Manip. *anu*, *onu*, *noa*.

40 *Mouth.*

a. Lep. *abong*, Abor-M. *napang*, *napung*, Nag. *topang*, *tabang*, Kum. *labaung*, Semitic *pam* &c.

Af Gal. *afan*, Dan. *afa*, Malag. *vava Ason*—*pany*, *ban*, *fafam*, *baba*, *fafa*, *fefa*.

b. Limb. *mura*, Mag. *nger*, Manip. *mamun*, *chamun*, *khomar*, *klasmor*.

c. Kir. *doh*, Mar. *muthu*, Gond. *udi*, Murm. Gar. *sung*, Sunw. *so*, Chep. *mothong*, Newar *mhotu*, Kir. *doh* Gar. *hotong*, Nag. *tun*.

d. Changl. *noang*, Dhim. *nui*, Manip. *ania*.

41 *Moschito.*

a. Lep. *many kang*, Nag. *many-dong*, Manip. *kang*, *chahang*, *ting-kheng*, *tangkhang*, Burm. *khyeng khyen*, Yuma *kang*.

b. Abor *sunggu*, Mish *radze*, Kar. *putso*, Manip. *kachang*, *sangsang*, *thangtan* *thangkran*, *karchi*, Bodo *tham-phor*.

c. Chep *ya* Aka Mish *ia* Nag *ayah*.

d. Changlo *binang*.

44 *Oil.*

Murm. *chigu*, Gar. *chagu*, New *chikang*, Mag. *sidi*, Changl. *si*, men-
si Chep *sate* Mish *sua*, Burm. *achhi*, *shi*, *tsi*, Yuma *tsi*; Nag. *tauthi*,
totsa, *kakiz*, Manip. *to-chai*, Dhim. *chuiti*, Bod. *thou*, Deor. Ch. *tu*,
Manip. *to-chai*, *thau*, *thao*, Karen *tho*, *thu*, Bongju, *kersi*.

45 *Plantain.*

a. Lepch. *kar-dung* Singph. *lungel*.

b. Limb. *la seh'* Ker. *gnak si*, Murm. *muche*, Mag. *mocha*, Sunw. *mu-hi*, Chep. *maise*, Mish. *phaji*, Manip. *nguchang*, *ngashi*.

46 *River.*

a. New. *khusi*, Dhim. Garo. *chi*, Abor-M. *asie* ("Water".)

b. Mag. *khola*, Chep. *ghora*, Kol. *gara*, Uraon. *khar*, Naga. *khar*,
Sunw. *kha*, Kum. *tu-gha*.

c. Bodo. *doi*, Manip. *duidai*, *tui-kouk*, *tuthau*, *tu* (Water).

49 *Skin.*

a. Lep. *athun*.

b. Limb. *horik*, Garo. *holop*, Kol. *harta*, ur, Manip. *ohul*, *arhun*.

c. Murm. di *bhi* (Gur. *dhi*) Singph. *phi*.

50 *Sky.*

Lepch. *ta liang*, Sunw. *sarangi*, New. Mag. *sarag* Bod. *no khorang*,
Abor. *talang*, Mish. *bra*, Nag. *rang-tung*; Male. *sarange*, (Day &c.)
Rang. lung, *lan*, *lungo* &c. is a wide spread root applied also to air,

day, sun, God, Tib, Ugrian, African, Asonesian. In the more radical form *la, ra*, it is still more common.

52 *Star.*

Chunglo murgeng, Singp sagan, sakan, Manip chagan.

53 *Stone*

Milch. *rak, rug*, Tiberk *ruh, galling*, Him. *lung, lung, lohong* &c. *can.* (Tib *do*); Garo *lona*, Aka *clung* Abor *ling, ibang* Mish *mula* Singph *tlun, talong* Nag *long* Manip *nung, lung, talo, thulung, ngalung*, Kum *lung, lum*, Car *long, lu*.

P Mong. *cholon, chola* (ordinary form of Seythic *kual, kel* &c.) *sin-dhi rehan* Af.—Saom. *dugha, lugha* Galla *duga, duga, daka* Amh. *dengga* Oukna *muluta*. Ason—Mille *rakuh*, Tasm. *loinai, loine*, Aust *walang, marama* &c.

54 *Sun.*

a. Abor *arung*, Nag *rang-han* (See *Sky*.)

b. Bodo *shan*, Gar *san, ra-san*, Deor. Ch. *sanh*, Nag. *san, rang han*, Singp *tsan*, Jili *katsan*, Kol. *singi*

Tung. *shun*, Ug. *shundy* &c. Semitic *sham* &c. Indo-Eur. *sol, sun* &c.

55 *Tiger.*

a. Limb *keh va*, Kir *kiwa*, Dhim *khun*, Nag *khv, layi, takhu*, akhu, Manip *kai, takhu, chakui, khu-lui, akhu-li, sang-khu, sahui, sakhuu*.

b. Mag *ranghu*, Singph *sirong*.

c. Sunw *gupsa*, Chep *ja*, Male *sad*, Nag *sa, sahu, chianu*, Bod *mocha*, Garo *matasa*.

d. Ab. *simioh*, Aka *samnya* Mish *tamya*.

57 *Tree.*

a. Lepch *kung*, Manip *thing-kung*, Kumi *akung*, tagom. Simang *kuing*.

b. Tiberk *pong*, Bod *bong-phang*, Garo *pan*, Deor Ch. *popon*, Burm. *apong, apen*, Singph *phun* Nag *hang, pan, pe*, Manip *thing-bang, sung-bang, biog-bol* &c.

Ug *pu, pu, ta* &c. Sam *pu, pe, poi*, Tungus *mo, mo*, Pushtu *wana*, Af. *vahad*. Ason.—pon, *puang, pohon, puna* &c.

58 *Village.*

a. Murm *namso*, Gur *naso*, Nag *ha*.

b. New. *gang*, Sunw *goun*, Lhop. Lepch *kyeng*. This vocable is widely spread in Ultratindia and Indonesia, but frequently applied to "family", "tribe" &c.

59 *Water.*

a. Kumi, Kyon *tui*, Kyan *tawé*, Mrung *tei*, Lungk. *ti*, Rakh. *ri, re*, Kar *hti, hte*, Chep. Milch. *ti*, Magar *di*, Chong *ri* Murm *kutui* [see T. U.]

ETHNOLOGY OF THE INDO-PACIFIC ISLANDS.

APPENDIX TO SEC. 6 OF CHAP. V., PART II.



COMPARATIVE VOCABULARY OF SEMITIC AND AFRICAN NUMERALS:

I. SEMITIC

As the Semitic system occupies a peculiar place with relation to the Asiatic on the one side and the African on the other I shall give it separately, referring to the Semitico-African list for the detailed statement of the affinities when they are both African and Asiatic.

One.

A. (a.) wa-h-id, or wa-h-ed, wa-h-ad, a-kh-ad, masc.* wah-id-a-t-a, a-kh-ad-i fem. Arabic, e-kh-ad' masc., a-kh-at fem. Hebrew, kh-ad' masc., kh-ada fem. Chaldee, ta at Mahrah, Gara, on t. no. va Egyptian,

The Semitic forms are most closely connected with the Ugrian, in this agreeing with the Indo-European. [Semitico-African I. A.]

As a definitive, separate or conereted with other roots, a 3d pronoun, a demonstrative &c. the most archaic Semitico-Libyan form of the root A appears to have been the aspirate and sibilant, passing into the dental and guttural, hu, su, tu, khu, ku &c.

As a unit the purely aspirate form is found in African languages, but it is rare. The sibilant is the most common, not only in African systems but in the higher numbers of the Semitic, from which it follows that Semitic dialects had originally s forms in 1 also. The variations were simply the definitive in its different forms. Thus forms similar to the Babylonian su-na masc., su-at, fem. "this he, she", su-na, su-na, su-n, su-nu-t, su-nu-t plural (consequently not 1 but 2 as in sa-na 20 and the common Semitic 2 she-na &c.), the Egyptian en-tu-f masc., en-tu-s fem., en-to-s-en, s-en pl (3d pronoun), the Arabic ho-na masc., hi-yat fem., ho-m pl. masc., ho-mu pl. fem. and other Semitico-African forms of definitives are found as units in 1 or in higher numbers. Hottentot, which has the guttural form of the unit, shows the archaic range of definitives and consequently of numeral elements very clearly, quei-mh masc., quei-s fem., quei-hu pl. masc., quei-tee pl. fem., quei-na or qu-an pl. com.

Many of the numeral terms have a redundancy of definitive elements. The primary pronominal postfixes appear at a remote period to have become conereted with the root, when new or secondary postfixes were superadded. Thus the nucleus of the Semitic 2 was the definitive with its dual or plural postfix th-n, s-n, t-v. At a later stage a secondary plural postfix was assumed as in ath-in-an masc., ath-in-t-an fem. Arabic, ta-r-t-en Chaldee, she-ta-gim Hebrew, (in which the original na is elided although preserved in the masc. she-na-gim where the two plural elements are in juxtaposition as in the Arabic term.)

In the current forms of 1 the dental postfix only is used. This is the definitive itself, with or without its secondary feminine power. In other forms the liquid plural na, la, ra &c. and the labial masculine are preserved as postfixes, and it is probable that in the original Semitic system they might all be used in 1 also, the plural power of the liquid being secondary.

(b.) The sibilant unit takes the liquid postfix in 10 ash-ar, ac-ra, Ar.

* Some Provincial and extra Arabian forms are included, to show the phonetic variations to which the terms are liable.

which appears to be preserved as a pronoun in the Hebrew relative *esh-er*. Terms for 5, 10, 100, are units in most languages, and this term is still used for 1 as well as 10 in Africa. [Semitico-African Numerals 1. A. g.]. The same form occurs in the Semitic 3. The *n* form of the postfix, variable in some dialects to *r* and in African ones to *l*, occurs in 2, with its dual or plural force, but here it is probably to be considered as the second element in a compound of two definitives.

(c.) The labial (masculine) postfix occurs in terms which must have been originally units. In the Semitic system this form first appears in the highest term of the primary quinary system, 5, and in African systems it is used in 10 as well as 5. In Egyptian it is preserved in 3 and it enters with the same power into the Semitic and Egyptian 8. If the labial had occurred in 3 and 8 only, it might have been considered as a second radical definitive in a compound, but in 5 and 10 it must represent an archaic form of the unit. In African systems it is found in other numbers as a postfix or prefix, in the same mode as it occurs attached to substantives and qualificatives. [See the remarks on 3. A.]

B. *a-wal masc.*, *a-wal-i tem* "first", Arabic, [our Persian.]

This archaic unit is preserved in African languages as a cardinal term. In Semitic it occurs as such in the contracted form as in 4. It is a N and E. Asian and Dravido-Australian definitive and unit.

In the Semitico-Libyan formation the labial was an important archaic definitive. It is largely preserved as a postfix and prefix. As a 3d pronoun and demonstrative, the sibilant, dental or guttural definitive appears to have early gained exclusive currency. The labial, however, keeps its place even in some separate terms, as in the interrogative pronoun, *mi*, *mih* Heb., *Hansa*, *man*, *mā* Ar., and in the Gonga 3d pron. *bi*. It is also relative in Arabic, *ma*, *Gara*, *ma*, *Mahrab*, *mab*. In Hausa it is demonstrative (*wang-ga* "this", *won-an* "that") and relative (*won-sha*, *won-ner*). In the Zambian family the labial is one of the chief definitives, 3d pronouns and demonstratives. From a very early period the labial definitive acquired a masculine power and it is possible that the numeral *wa-l* and the allied African *ba-ri*, *ma-ri*, *va-t*, *pa-ka*, *ba-si*, *ma-si* &c. were formed when it had acquired that power, but while secondary definitives might be preposed as well as postposed. The sibilant and dental was common before it became feminine, and the masculine function of the labial may have been a consequence of the other principal definitive becoming feminine. But it is more probable that the labial was the first to receive a sexual (masculine) power, and that as a numeral element in the archaic Semitico-Libyan system it is to be considered as masculine. The other definitive certainly occurs in that system as in the pronominal both as an archaic common and as a later or secondary feminine particle. [See Semitico-African Numerals 2. B. c.]

Two.

ith-na-ni, *ath-in-an*, is in *in*, *s-n-in masc.*, *ath-in ta n fem*. Ar., *sha-na*, *sha-ne m*, *sha-na gtu*, *masc.*, *sha-na gtu*, *fem*. Heb., *sa-rah* Malah., *te ren* *masc.*, *ta-ri-t-en* *fem* Chald. (*s-n-ra* or *s-n-n* 20 Baby., *lonin*), *s-hun*, *s-en-te*, *s-n ti*, *s-nan-s* Eg. Copit., *the-ni* Berb., (*s-n* in 12. 2) &c.). *sin* Shilluk, *ning* Bannum, *s-ni* Kalah., *ki-le-te*, *koe-li-te*, *quo-le-t*, *nub-el*, Abyss., *he-le-ta*, Gatal, *kili* Arkho.

The initial sibilant (sh, sh, sb, s, the variable khe, ki, kae) is found in 3 and other terms, and the t and k of 1 are only variation of it. In the Indo-European 2, 3 and 4 it occurs in the dental form t, d, and in Scythic and other N. and E. Asian languages as s, t, k &c. In the Indo-European and several Scythic terms (2, 4) a labial is interposed between the initial and the final elements. In the Indo-European 2 the labial only is preserved, in 4 both the labial and the final, t-va-r &c. In the absence of the labial Semitic resembles the Caucasian, (Mingrelian shi-ci, which has the Agathic vowels, Samoiède si-ri, si-de). In the Caucasian z-u-r, Mongolian k-o-yar, (d-u-r in 4, z-u-r in 6) the influence of a lost labial is perhaps still felt in the broad vowel. As an essential element of 2 n, l, r is common in N. and E. Asian numerals. Chinese has it in the apparently contracted ni, ni, urh 2. Urian, which has lost it in 2, preserves it in 4 ni-lu, ni-l, ni-l-i and in 8 ul-u &c. Aino has it in 4 i-ne, y-ne, which appears to be a contraction of the full term preserved in the Yeniseian 2 ki-na, also hi-ne, i-ne, and in the Aino 1 zi-ne. The last, like the Kamscharkan kü-ni? is doubtless a remnant of the original system in which the term was used as a unit. It is a Scythic 3d pronoun.

The postfix na, ne &c. of 2 is the Semitico-Libyan plural definitive. The numeral s-na, s-en, sh-na, sh-in was therefore in all probability the plural form of the definitive, and identical with su-na, s-en &c. In other derivations also the liquid definitive is not only a principal element in 2 (and often in higher dual numbers, 4, 8), but is a plural or dual particle. In Arabic it is dual as well as plural. If the sibilant were considered as an archaic prefix as in Zimbian, as in the Malagasy *iz-aho* "I", and as in many substantive words of Semitico-Libyan glossaries, na would become the radical element of 2.

The wide prevalence in Africa of a labial term, full and contracted, (ba-ri, ba-r, a-r, ma-l-ab, bi-ri &c. &c.) and the persistence of a similar term in the Semitic 4 (2 dual) renders it probable that it was archaically a term for 2 in the Semitic family, or a that western branch which first gave numerals to Africa. See African numerals 2, 4, 7 (3, 2), 8, and Semitic 4, 7. In the occurrence of the labial both in 1, and 2 the archaic Semitico-Libyan system resembled the Scythic and the Dravido-Australian.

Three.

A. The Egyptian sh-men-t, sha-me-t, sh-m-t, sh-m-ti, sh-m-te appears to preserve a term once possessed by Semitic. It recurs as the unit in the Egyptian 10, without the sibilant prefix, men-t, inn-t me-t, me-ti, me-te, and in the Egyptian and Semitic 8 (5 3). The Egyptian 8 is sh-mun, sh-men, sh-mu-ne, sh-mr-ne, sh-me-ni, 80 h-me-ne, ka-me-ne, kh-em-ne. The Semitic 8 is sh-mon, the man, the-man-id e. Bishari like Egyptian has the labial in 8, man, as well as in 8, u-mhai.

A similar term was used in an archaic N. and E. Asian system in which the labial was the qualitative postfix and the sibilant the numeral root, primarily definitive and unit. In the archaic Semitico-Libyan system the labial does not appear to have been qualitative, but instilling. Sh-in, sh-un &c. is the masc. form of the sibilant unit, 3 being very commonly a unit (properly 2, 1, but as in other terms one of the words

was early dropped for brevity's sake). The superadded *t* of Egyptian makes the term *tem*.

As a unit the sibilant recurs by itself in the Egyptian *she* 100, and *sha*, *she* 1,000, and it is the initial element in the Semitic Egyptian 2, Semitic 3, Semitic Egyptian 6, 7 and 8, corresponding as we have seen with the Indo European *t*, *d* of 2, 3, 4, with the Indo European sibilant of 6, 7 and 8, and with the N. and E. Asian sibilant, dental and guttural unit of 1 and higher numbers. If the sibilant be considered as a prefix the root becomes the labial.

In 3 the same archaic form is preserved by Caucasian, *se-mi*, *sa mi*, *su-mi*, *ju mi* Georgian *cha b go*, *sha¹-go*, *sha-numba*, *ch¹-ba*, Chinese *sa-mi*. The sibilant alone recurs in Circassian (*sh*) Korean, and Kamtschatkan. The broad form of the dental recurs in Yessoian with the prefix *dong-em*. The common double form of the Scythico-Chinese sibilant, dental and guttural unit occurs in the 3 of Ostiak, *chod-em*. In Scythic and allied N. and E. Asian languages the labial definitive and prefix occurs in the forms *men*, *man*, *mon*, *me*, *em*, *m* &c. as in the Semitic Egyptian 3 and 8.

The first element of the Egyptian term (*she*, *sha*) is the same as that of the Semitic (*sha*). The vowel is a variation from that which the particle has in Egyptian as a definitive *tu*, *su*, and in 4 *1-tu*, in 5 *tu*, in 6 *su* &c., and in 1,000 *she*.

In the Nilotic languages generally the form in *o* or *u* is equally common with the Semitic in *a*, *i*, *e*. Thus the Berber 5 is *su-m-us*, the Dulla *bu-su-me* and the Darfur *us*. Bishari has also *su* as the unit for 5 in 6 (*su-goor*), 8 *su-mah*, and as the unit for 10 *tu-mum*. In several terms in the Galla group the same form is followed, *te-ko* 1, *su-dle* 3, *ko-n* 5, *tu-r-ba*, *tu-bah* 7, *su-ggal* 9, *ku-dan*, *tu-ma* &c. 10. Gonga and Malagasy preserve the form in *i* *1-so*, Gonga in 5 *huch*, in 6 *ho-su*, in 8 *hos*, and in 9 *ho-da*. Even the more purely Semitic languages of Abyssinia have the Egyptian form in some terms. Amharic *hu-l-er* 2, *so-s-t* 3, *an-mi-st* 5, *su-bha-t* 7, Tigre *shu-ha-ti* 7, *sho-mun-ti* 8, Harraji *su-t*, *su-d* 8. It is needless to add examples from the more western African language. The connection between the African and the Semitic numerals is mainly through Himyaritic, and it is probable therefore that in the early form of the Himyaritic the definitive and unit was prevalent in the *u* and *o* forms, as well as in *a*, *i*, *e*, for the latter are found in Egyptian, Gonga and other African systems current along with the former. The modern representatives of Himyaritic preserve several examples of the *o*, *u* form of the definitive as a numeral element, both principal and accessory, *tu-ut* 1, *se-rah* 2, *ar-ba-ut* 4, (*arr-ut* Amharic), *kho-m-sa* 5 Mahrab, *slau-a* 7 Gara, *thu-ul* 8 Gara. Babylonian has it in *so-su* or *su-si*, 60, which is similar to the Amharic *so-s* 3. As a definitive the broad form is the Babylonian 3d pron *su-ta* masc, *su-at* fem., *su-mu*, *su-na* pl., *-su* poss. postf., which agree with the numeral form. In Hebrew and Arabic it is preserved with the aspirate consonant *hu*, *ho-ma*. In the Hebrew *ga-th* fem. "this", the sibilant is preserved. With these forms the Egyptian *su*, *tu*, Danakil *us* (3d pron masc.), Hausa *su* (pl 3d pron), Galla *tu*, *ku* (demons.) agree. It appears therefore that the African forms of the unit in *u*, *o*, correspond with the Semitic-Libyan definitive and with an archaic form of the Semitic unit.

The variations in the vowel were probably to some extent flexional. U was an agentive or nominative postfix in the archaic Semitic system. It may also in some cases have been a softened form of the masculine postfix. I is feminine. It is also possessive. A plural power cannot of course be ascribed to the u or i of the definitive when used as 1.

B. *tha-la-th*, *sa-la-tha*, *sa-la-sa fem.*, *tha-la-tha-ta masc.* Ar., *she-lo-hah masc.*, *sha-lo-sh fem.* Heb., (*si-la-sa*, 30, Babylonian), *to-la-ta masc.*, *to-la-t fem.* Chaldee, *se-le-ste* Tigre, *tha-th-it* Mahrah, *tha-k-it* Gara., *ke-ra-d* Berb., *k-ra-t* Shillah, (*so-s-t* Amharic, *to-s-k* Nubian, *ta-tu*, *sa-tu* &c. &c. Zimbian &c.)

In *sa-la*, *she-lo* &c. the sibilant unit is followed by the liquid *la*, *lo* &c. Radically the compound may be the same as in 2,—*l*, *n*, *r*, being variations of the same definitive in the Semitico-African as in the Scythic systems. From the Hamyaritic and Zimbian terms, and from the occurrence of such forms as *su-su* in higher Semitic numerals, it is clear that the radical term was a double or reduplicated unit, which varied from sibilant and dental to liquid forms, *s-s*, *t-t*, *r-r*, *l-l*, *s-d*, *s-r*, *s l*, *t-r*, *t-s*, *k-r* &c. The two forms, the sibilant or dental, and the liquid, with their combinations, must have co-existed from a very remote period.

The primary form *su-s*, *tha-th*, *tha-k* &c., connects itself with a very common double form of the unit in the Scythico-Chinese systems. The variation of the *s*, *t* &c. to *l*, *r* occurs in these N. Asiatic systems. In the Koriak 3, which is not reduplicated but is simply the sibilant unit, it varies from *sho*, *so*, to *ro* and *yo*. The Indo-European *t-ra* is a similar form to the Scythic *ko-r*, *ko-l*, *ha-r*, *ku-j*, *chu-d*, and to the Semitico-African forms in *t-r*, *t-l*, *k-r* &c. If the initial, in all these terms, be considered as a prefix, the simple unit remains the second and radical element, as in the remoter E. Asian systems, Chinese, Koriak &c. If both elements be considered radical, and this appears to be the correct view, the term is still merely one of the archaic forms of the unit and definitive. Comp. the demonstratives *zo-th* Heb. *fem.*, *i-za-to* Malagasy, *dza-ka*, *dza-li-ka* *ta-ka*, *ta-li-ka*, *fm.*, Ar., *thi-na* Berb. *f.*, *za-na* Galla *f.* The *l* form of the definitive, although common as a single particle in the Semitico-Libyan languages, occurs rarely with the preposed sibilant, the common form being *n*. The Hebrew *ha-lla-zeh m.*, *ha-lla-zu f.* "that", is an example of a demonstrative compound similar to the Semitic 3.

Four.

A. *ar-ba fem.*, *ar-ba-ta masc.* Arabic; *ar-ba-ah masc.*, *ar-ba fem.* Hebrew; *ar-be-a' masc.*, *ar-ba fem.* Chaldee (*ir-ba-ya* 40 Babylonian); *ar-ba u l*, Mahrah. Gara; *ar-ba ti* Tigre; *ar-ba ta* Galla; *a-f-t*, *f-tu* Eg.; *ar-at*, *ar-ut* Amh.; *u-bah* Arkiko; *fou-so*, Tibbo, *fu-du*, *hu-du* &c. Hausa; *fu-tu* Kalahi; *hau-da*, *au-da* &c. Gonga; *a-tu-r* Saumali; *fere* Danaki; *e-fa-r*, *e-fa-tra*, *e-fa-d*, *e-fa-tu*, *e-fu-tsi* &c. Malagasy; Zimbian *wa-na*, *wa-n*, *ba-na* &c.

These are terms for 2, i. e. 2 dual. The Semitic collocation, it will be remarked, appears to follow that of the cognate Galla, Malagasy, Indo-

European and Scythic term for 2. The Egyptian, Sudanian, Galla and Malagasy collocation fall wa that of the more prevalent African 2 (Zumbian, Nubian, Nigerian) which is also Scythico Australian.

But as the labial is a postfix in the archaic Semitico-Libyan as in the archaic N. E. Asian, and the initial ar or ar-ba has the same elliptic appearance which ar, an, al, ir, il &c. have in the Scythic system, it is probable that ar-ba, like them, has lost its original initial consonant or prefix. The general Scythic affinities not only of Semitic but of all the other S. W. numeral systems of the Old World,—African, Euskarian, Caucasian and Indo-European—refer us to the Scythico-Chinese province for illustrations of the Semitic numerals, and an example of an allied term is probably extant in the Mongolian *dör-bo*, *dür-ban*, *tir-ba* &c. (in Turkish, with a dental postf., *der-t*, *dür-t*, *dwa-ta*, the r elided in the last as in the Indo-European *dwa*, 2), in Indo-European *cha-t-va-ra-s*, with the sibilant postf. The Mongolian *ar-be*, 10, (also *ar-ban*), is a precisely similar term to the Semitic *ar-ba*, but although the term of the final consonant and the postfix doubtless identical glossarily as well as phonetically, the initial consonant of the root may have differed. The Mongolian term is probably a contracted unit like the Caucasian *ar—*, *er—*. The Semitic must be referred to a term for 4 or 2. The Georgian *r-wa*, *r-uo*, *ar-a*, *ovr*, 8, [4 dual], appears to be a similar elliptic term, and the Mingrelian *bar*, *bar-l* probably preserve its lost initial. In the other Caucasian languages it is also the labial in other Scythic forms, *m-itl-go*, *be-itl-gu*, *m-ik-go*, *me-i-ba*.

The Malagasy *e-far*, 4, and the corresponding African terms for 4 and 2 preserve the full form of the Semitic *ar*. The Danakil *mal-ub*, 2, has the labial postfix as in *ar-ba*, and the Malagasy *r-na*, 2, is probably a similar contraction of *far-na* or *fara-na*, resembling the Georgian *r-wa*. The labial definitive postfix occurs concretely in the Semitic glossaries as well as in those of the allied Libyan languages, and Hebrew has it in the modern term for 2. (For the evidence of the wide prevalence of the Libyan labial in 2, 4, 7, (i. e. 5, 2) and 8, see African Numerals.) The Egyptian *f-tu*, the cognate African terms in *d*, *s* and *r*, and the existence of nearly all the varieties in Malagasy (*r*, *d*, *tu*, *tsi*), corroborate the inference drawn from the Semitico-African terms for 3, that, in the archaic Semitico-Libyan, as in the Scythic, definitive and numeral system, the definitive and unit in *l*, *r*, *n* was merely a variation of that in *s*, *t*, *k*. Although the liquid *r*, *l*, *n* was early combined in the Asiatic systems with other definitives (labial, dental &c.) in 2, 4 &c. it appears to be the essential element in the Sythic, Semitic and African systems.

Five.

A. *kha-m-sa*, *kha-m-s-fem.*, *kha-m-sa-la mase*. Arabic, *kha-m-ish-shah mase*, *kha-m-esh fem*. Hebrew, *kha-m-sha mase*, *kha-m-esh fem*. Chaldee, *kha-m-is-ti* Babylonian, *kh-ish Gara*, *khos-m-as* Mahrah, *a-m-is-t*, *au-m-is-t* Amharic, *au-m-ish-te* Tigre, *su-m-us* Berber, *su-m-as-t* Shilluk, *tu-su-at* Timani, *bu-su-me* Dolla, *a-m-us* Arkiko.

This term is probably a unit as in the African and Scythic systems. Radically *kha-m* is identical with the *sha-me*, *sho-m*, *tha-man* &c. of the Egyptian 3 and the Egypto-Semitic 3 of 9. But it is remarkable that in the proper Semitic languages the unit root takes the guttural

form as in the Semitic 1 (akh—), while in 6, 7 and 8 it returns to the sibilant form it preserves in 2 and 3.

The older African terms—the Berber, Shillah, Timani, Dulla—retain the sibilant and dental form of the initial unit, and the Egyptian (B) has it without the labial. [See African Numerals, 3, 5.]

The term is similar to the common Seythie unit in k, t, s &c. which appears in 1, 3, 5 and higher numbers. Examples of its occurrence in 5 are *ko-m-lch* Kamshatkan, which reappears in the sibilant form in the Samoiede *so-mha-lach*, *so-bo-rigga*, *sa-m-lik*, and in the dental form in the Mongolian *ta-bun*, *ta-bu*. * The Kamshatkan and Samoiede terms afford examples like the Semitic of a secondary postfix, and show that in these languages also the labial had lost its primary qualitative force and merged in the root when the native postfix was superadded.

B. The Egyptian *tu*, *tin*, *ti*, in 50 *tuin*, *teui*, was probably a native unit derived from the dental definitive and demonstrative (comp. *en-tu-f* "he," *en-tu-s* "she," *su* "he &c." *ta*, *ti*, *te* "this" fem, *tu* "this," *tu* relative fem.) In the analogous form *su* it was probably the oldest form of the sibilant, dental and guttural unit. It is still preserved in the Babylonian 60, *su-su* or *su-si*, and in the initial element of the Semitic 2, 3, 6, 7 and 8 the sibilant also keeps its place. In the older African forms of the Semitic 5 (A) it is also retained, as we have seen, in the forms *su* and *tu*.

Six.

6 is simply the unit—for 5, 1—in the prevalent sibilant form. Egyptian preserves the labial postfix of the archaic mother system *s-on* or *s-ov*, *s-oo*, *s-a*, but in 60 has the pure unit or definitive *se* (as in 100 *she*, and 1000 *sha*). The Euskarian *sei* is the same term. Semitic has *si*, *si-ta*, *se-te* fem., *si-ta-ta* masc. Arabic, *shi-shah* masc, *she-sh* fem Hebrew, *shi-tta* masc., *she-t* fem. Chaldee, *sha-t-id* Gara, *ha-t-id* Mahrab, *se-d-ist* Amh., *se-d-ishte* Tigre, *se-d-is* Berb., *su-th* Shillah. These terms are the same as the Indo-European *sha-t*, *sh-sh* &c. and the Seythie double forms of the sibilant, dental and guttural unit in 6 (*chu-t*, *ku-t* &c.), 7 (*sis* &c.), 100 &c. The Hinyaritie and derivative African forms shew that the second sibilant or dental is not a secondary postfix, and that the Semitic term was immediately derived from the double unit. This form was an archaic Semitico-Libyan term for 1 probably feminine, but as it is best preserved in a ternary series (3, 6, 9), the Semitic 6 may be 3 dual.

Seven.

sa-ba, *sa-be* fem. *sa-ba-ta* masc. Ar., *shi-bah* masc. *she-ba* fem Hebr., *shi-bey* masc. *she-ba* fem Chald., *ha-ba-id* Mahrab, *sh-u'* Gara, *sha-ba-te* Tigre, *se-ba-t*, *su-bha-t* Amharic, *se-t-ech*, Eg., *se-t*, *sa-d* Berb. *shash-t* Eg., *zos-pi* Eusk. This is the Indo-European *sa-p-t* and Ugrian *sa-b-et*, &c. in which the basis *sa-p*, *sa-b*, *si-m* &c. is the sibilant unit with the archaic labial qualitative postfix. The Egyptian and Euskarian unit preserves the double form found in the Ugrian *sis-in* &c., in the Semitic and Indo-European 6, and in several African terms. The term, in its original form, was 6, 1. See Indo-European and Seythie Numerals. A similar form of the unit is preserved in the Egyptian 3 and Semitico-Egyptian 8.

Eight.

tha-ma-n, sha-ma-n *fem.*, tha-ma-ni-ta *masc* Arabic, sha-mo-n-ah *masc.*, she-mou-eh *fem* Hebrew, te-ma-n-ja *masc.*, ta-m-n-e *fem* Chaldee, tha-man-id Mahrab, thu-m Gara, shu-mun-te Tigre, se-min-t Amh., sh-men Eg., t-em Berb., t-emp-z Shillab. This term is evidently not formed from 2 or 8, but from 3 in the Egyptian form (i. e. 5, 3, as in all the African and many other systems).

Nine.

ti-s', ti-sa' *fem.* ti-sa-ta *masc* Arabic, te-sha *fem.* ti-she-ah *masc.* Hebrew, Chaldee, sa-id Mahrab, Gara, ze-tti Amh., ze-te-in Harragi, za-te-na Gufat, tish-ate Tigre, p-sit, p-sis Eg. (p-is in 90), dza Berb., tzan Shillab. This is a Scythic form of the unit, occurring in the Kamschatkan dys of 1, Hungarian tiz 10 &c., and in the Mongolian dsi-sun 9, (1, 10). It is also the Semitic 9 and 3, so that 9 is probably 3 trinal. But as the African terms are generally 5, 4, it is possible that the Semitic 9 is the term for 4 found in several African languages, and recurring in 9 in forms similar to the Semitic. Agau si-za, sa-dja, se-dza 4, tsai-cha, se-ssa, se-s-ta 9, Gonga ach-ech 4, dje-ta, yi-dea 9; Shangalla zan-cha, an-za-cha 4; sa-sa 9. The full terms are preserved in some Zimbrian systems. Makua dialects ma-che-che, mu-tye-tye, i-tye-tye 4, ma-tana ba-ai ma-che-che, mzana-m-tye-tye, rhyanu na i-tye-tye, 5 and 4 (9). From these terms it might be inferred that the Semitic 9 was also a term for 4, but it has no resemblance to the current 4 either in its contracted or full form (ar-ba, war-ba &c). It appears to be related however to the current term for 2, and was probably one of the forms in use when the numerals varied regularly with the gender of the noun. The Hebrew *fem.* she-ta-yim is a similar term. In the Semitic terms for 3 a similar variation occurs, Arabic, Hebrew &c. having tha-la-th, she-lo-sh, while Mahrab and Gara substitute the dental and guttural for the liquid tha th it, tha k it, and a like form appears to have existed in Babylonian su-su 60, with which the Amharic 3, so-s, is cognate. If the Semitic 9 be considered as 3 trinal its resemblance to terms for 6 and 3 is explained. But even in the current terms for 2 and 3 we have found a radical resemblance, so that a resemblance between 9 and 3 or 6 does not oppose but rather confirms an identification of 9 as ultimately 2 dual. Whether 9 be 3 trinal or 4 it agrees radically both with 3 and 4 because these agree radically with each other.

Ten.

A. ash-ar, ash-ir *fem.* ash ara-ta *fem.* Ar., as-ar-a *masc.*, es er *fem.* Heb., as-ra *masc*, as-ar *fem* Chaldee, ai-ish-r-id Mahrab, ish-r-id Gara, as-ur-te Tigre, as-ra, as-ir Amh.

B. men-t, ma-t, mn-t Eg. This is the Scythic labial unit and post-fix, occurring as 10 in the same form in Tungusian menz (in 1 min). But the Egyptian term is evidently the second of the definitives found in 8 and 3 and here divested of the initial sibilant unit, which it retains in some other African forms [See African Numerals, 10 B. b.]

APPENDIX TO SEC. 6 OF CHAP. V., PART II.

B

SEMITICO-AFRICAN NUMERALS.

One.

A (a) *wa-hi-d*, *wa-hi-da*, *a-ha-d*, *a-kha-d* *masc.* *wa-hi-da-ta*, *a-kha-di* *fem.* Arabic, *e-khad* *masc.*, *a-kha-t* *fem.* Hebrew, *khod* *masc.*, *kha-da* *fem.* Chaldean, *hha-di*, *a-dde* Tigre, *bha-d* Haragi, and Amharic. * The root in these forms is *hi*, *ha*, *kha*, *a*, variations of the Semitico-Libyan definitive, and the other variations, *si*, *ti* &c., were doubtless archaically current as the unit.

(b). *ta-ut* Aharah, *Gara*, *ta-t* uria Maria. From the analogy of *ar-ha-ud*, 4, this analysis is clearly the correct one. If the root has no vestige of the labial, it is the Semitico-Libyan dental definitive, also occurring in the sibilant form in the higher Semitico-Egyptian numerals, and in the dental form in the Egyptian 5.

(c). *uo-t* (or *u-ot*) Egyptian, (also *u-ai*, *u-a*, *u-ei*, *u-i*, comp. the demonstrative *ai*, *ei*, *e*, *i*, in *pai*, *tai*, *nai* &c.)

If the guttural and aspirate in (a) be the root (*hi*, *kha*, *ha*) and the vowel or labial (*wa*, *a*, *e*) a mere augment or prefix, it must be ranked with the Hinyatic *ta* and Egyptian *t*, because in Semitico-Libyan the aspirate and guttural definitive and unit passes into the sibilant and dental. In the Semitic 5 the unit recurs in the aspirate guttural form. In the allied Seythic systems the guttural, dental, sibilant &c. appears to have had an independent definitive power even when postfixed to the labial.

In Africa the aspirate, sibilant, dental and guttural definitive also occurs as the unit in accordance with what we have indicated as its archaic Semitic range. Even in the same group the consonant assumes different forms. Thus in the Gonga group we have.—

(d). *i-ta*, *i-so*, *i-sta*, *i-ka*, *e-koe*. In this double form the final element is not to be considered as a postfix, because the definitive itself occurs in the same double form, and the initial element rather than the final appears to be a servile. In the Egyptian 3d pronoun, *an-tu-f* *masc.*, *an-tu-s*, *an-te-s*, *fem.*, the nasal is prefixal as in the 2d and 1st pronouns, and the dental is the radical definitive as in *ta*, *ti*, *te*, "the", *fem.* But in definitives and units the prefix being itself definitive both elements may be considered radical. The unit is generally not a single definitive but a double or intensive one, being a numeral application of a demonstrative or 3d pronoun in which two definitives are usually combined. The recurrence of the dental definitive, variable to the guttural, as a postfix in higher numbers in most of the Nilotic languages does not appear to reduce it to a mere postfix in 1 and raise the initial element to the character of the sole unit root.

In some of the other Nilotic languages the initial element assumes its full nasal form as in the pronouns. Danakil *in-ike*, Shaho *in-ek*, Bisharye *eng-at* or *en-gat*, Tumali *in-ta*. These are clear vestiges, found from the Red Sea to the western portion of the Nilotic province,

* In App. A the vowel of the root is improperly separated from it and carried to the postfix.

of the ancient use of the double definitive as the unit. The Darfur *d-ik* is a variation of the same form or of the cognate (*d*). The Malagasy *i-sa*, *i-so*, *i-si* corresponds with the Gonga sibilant form and the Semitic *hi*, *ta* &c. In Asonesia several varieties are preserved, *e-sa*, *i-sa*, *e-si*, *a-sa*, *i-cha*, *ji*, *i-ta*, *ta*, *ta-si*, *ta-hi*, *ta-ka*, *sa-da*, *sa-ra*, *se-ra*, *ai-ti*, *me-isa*, *ma-isa*, *m-esi*, *sa-mo-si* &c. Some of the Nigerian languages retain the nasal prefix in higher numbers, and prove that it was prefixed to the numerals throughout in some systems. Wolof has it in 2, 3 and 4.† Some other Nigerian systems had the labial prefix. It is preserved in some of the Ashanti and Gabon dialects (*hi*, *mi*, *mie*, *ba* &c.) In the Zimbrian systems substantival prefixes are used in the substantive form of the numerals, the possessive rendering them ordinal. When used as cardinals or qualificatives they take the definitive prefix of the connected substantive. Thus in Kosah I has the substantive form *isi-nye* (so *isi-bini* 2, *isi-tatu* 3 &c.) and the qualitative forms *um-nye*, *li-nye*, *in-nye*, *si-nye*, *lu-nye*, *lu-nye*, *ku-nye*, and higher numbers take the plurals *aba-*, *ama-*, *e-zin-*, *ezi-*, *emi-*. In some of the published lists the prefixes are confounded with the roots, particularly in the common contracted forms of the prefix as in *mnye* 1, *mbini* 2, *ntatu* 3 &c. In other cases the consonant of the prefix is elided and the vowel only preserved. When it is recollected that in the archaic Semitico-Libyan formation definitives which in their variations embraced the whole range of consonants, might be used either as prefixes or postfixes, and that both are found in many words, the difficulty of analysing and comparing the Semitico-African systems will be understood. It is only where a considerable number of concurring facts are obtainable that satisfactory conclusions can be arrived at.

The common Zimbrian term appears to preserve the same form of the unit, with the labial definitive as the initial, although the latter has become a substantive part of the root. The most common form of the ultimate root is *si*, variable to *ji*, *yi* &c. and corresponding with the Malagasy *si* and Arabic *hi*, [comp. the Eg., Galla and Malagasy def. *si*, *zi*] but forms in *a* and *o* also occur as in Semitic, Gonga and Malagasy. In some languages *s* become *t* and in others *r* or *l*. The labial prefixal element has generally the form *mo*. The same combination is found in other formations, and whether both the definitives are to be considered as being primarily a def. compound used as the numeral, or a merely servile function is to be ascribed to the postfix or prefix, must be doubtful in most cases, the relative position of the principal and accessory definitives having varied even in the same formation. If the original form of *A* were *wa-li*, *wa-kha* &c., it would follow that all the Semitico-Libyan forms of the sibilant, aspirate, dental and guttural definitive and unit might at one time prefix the labial. But in the archaic non-concretized condition of the glossary it is clear that each definitive had a separate currency and was capable of being used as the unit. The combinations

† Mr Koelle's *Polyglotta Africana*, received since the text was written, enables me to make some additions. He gives *ya* as the Woloff prefix. In Bullom *si* (enough *nin*, *nim*) is prefixed to the 5 simple numerals.

indicated special distinction of sexual &c. The replacement of *s*, *t*, by *r* or *l*, found in the Arabic ordinal 1, takes place in the Zimbrian cardinal 1. This tends to the conclusion that *wal*, *war*, *wat*, *wah*, *wak* or *pak*, *bas*, *mos* &c. are all variations of one archaic term, whether simple or compound. A similar range of variation occurs in those forms of the Scythic unit which have the labial prefix. From the general structural analogies of Semitic in its most archaic stage and of Zimbrian in its existing one, it is probable that in *mo-si*, *mo-ri*, as in the Semitic *wa-hi*, *wa-li*, the labial was primarily accessory. In form it corresponds with the Egyptian *uo* of *uo-t=wo-t*. [See App 1, One B]. The following are examples of the Zimbrian term,—*mo-ja* Suaheli, *u-mu-e* (contracted) Ki-Kamba, *mo-dya* Makua, *yi-mo*, *lu-mo* Mudjama, (probably contracted forms with substantive prefixes, similar to those taken in other Zimbrian languages when the numerals are used as qualificatives), *mo-yi*, *mo-ji* Makonde, *mo-si* Takwani, *po-si* Masena, *Soma*, *mo-esi* Seelwana, *mo-si* Benguera, Kongo, Kambiada, *mo-shi* Angola, *i-mo* Mundjola, Yoruba, which in one dialect uses the Zimbrian labial prefix with its numerals, has the same form of the unit in 9 (1 from 10), *ma-i-sò*.

Considerable variations are found †. The prefix alone is used in some languages, and in others the root changes to *t*, *k*, *r*, *l*; *o-bo* Kuafi, *bo* Binin, *mo* Camancons &c.—; *a-to*, *a-to-k* Timbaktu, *wo-to*, *uo-to* Bongo &c., *va-ta* Panwe, *ma-ka* Batanga; [*ba-t* Euskarian.] § In the Mpongwe, by the common change of *s* to *r*, *ri* takes the place of *si*, *ma-ri*. The Panwe *va-ta* 1, becomes *va-la* in 6 (5, 1).

Although I have placed the Kuafi with the Binin and Camancon terms, I do not infer that the latter were derived from the former. They are probably contractions of one of the varieties found in Nigeria, *wo-r*, *wo-to* &c. The Kuafi itself must be considered as a remnant of a once prevalent Nilotic term from which the Nigerian were derived. The full E Nilotic term is probably preserved in the Agau *wal-ta*, *wol-ta* 6, and in the allied Nubian and Nigerian terms, corresponding with the Semitic *wal*.

In higher numbers the labial is common. It does not occur in the second term of the unit series, 3 (save as a postfix.) In Africa it was an archaic term for 5, (the 1 tale in the quinary system), under the forms *poma*, *puna*, *tung*, *mon* [5. G] In some Nilotic and Nigerian

† In Koelle's Zimbrian vocabularies the common form of the second element is *si*, *shi*, *s*, *sh*, *zi*, *z*, *hi* on the western side. In the S. E. both the *i* and *a* forms occur, *dshi*, *ts*, *tsa*, *za*, *ta*, *a*. In the West, Musentanda has *ko si*, which may be an archaic variety preserving the root with the guttural in place of the labial prefix. But it is probably a contraction of the form *ki-mosi* (comp. the Mimboma *bezi*, *ki-mozi*). In the Isuwu group (Cameroons &c.) *mo re* occurs, but the labial generally appears alone, *mo*, *i mo*, *i wo*. In Basseke the sibilant is replaced by the dental, *i wo te*. A similar change of the postfix is found further south in Kabenda *de-o-s* (comp. *mo si*, *mo s*, *ko si*). The Calabar dialects have similar forms *dsi-dsi*, *dee t*, *e dsi*. In Bassa and Kamuku the sibilant changes to the aspirate *hi*, *hia*, the form thus returning to the Arabic.

§ Koelle gives *mo-ko* Undaza, *eo-ko* Murundo, *nbo-g* Ndob, *fo g* Mfut, *po-g* Ngoten, *e ku* Achanti.

terms for 6 it occurs as 1 (5, 1), under the form *wal*, *wol*, *far*, *wor*, *fa*, *wa*, *wa* &c. In 9 it occurs for 10 in *Tumali*, *Masena*, *Sofala* and the *Kongo* group. As 10 it is found in *Nubian*, *Berber*, *Shilluk*, *Tibbo*, and in several *Nigerian* languages. In the dual series it is still more common. The Semitic and Nubian *wal*, *war* is the most prevalent term for 2 under the forms *bar*, *mal*, *vali*, *vili* &c. As 2 dual it occurs in 4 in Semitic (contracted to *ar*), in most of the *Nilotic* languages and *Malagasy*, *bahr*, *far*, *für*, *tud*, *fut*, *fus* &c. In 7 it represents 2 (5, 2) in *Bishari*. In 8 it occurs (as 4 dual) in *Danakil* and *Shiho*, *bahr*, *bahara*, and in *Malagasy*, *vulu*.

(c) Other varieties are found in the *Galla* *ta-ko*, *ta-k*, *to-ko*, *kow*; in the *Buissa* group *dai-ak*, *dai-a*, *de-ah*, *nai-a*, *da*. Probably the *Darfur* *de-ik* is to be referred to this variety rather than to (d). In some of the *Sudanian* and *Nigerian* systems the dental and guttural occur separately or combined, and in some cases reverse the *Galla* order. *Ga-di* *Kallabi*, *ki-de* *Begharmi* (comp. *Rish*, *gur*, *gir*). *Mendi*, *Pesa* and *Kosa* *e-ta*, *tuh*, *i-ta*. [*Gonga* forms] *Kru* *ku*, *Fulah* *go*, *Fanti* *e-ku*, *mi-e-ku*, *Akin* *bi-a-kun*, *Amina* *a-kun*, *Tambo* *ka-ki*, *Moko* *kia*, *Karaba* *ke-t*, *Karapay* *e-di*, *Yoruba* *o-k'ka*, *o-ko* [*Galla* *to-ko*]. The nasal occurs alone in the *Yoruba* line [*Shiho* *in-ek*] and *Ibo* *na* [adjacent *Hausa* group *nai-a*, *Kashua*].

The *Hottentot* *kui*, *koi-se*, *ui*, resembles the *Gonga* *e-koe*. Another *Hottentot* term *itswi* [= *i-tswi*, *i-tsoi*] also resembles the *Gonga* sibilant forms. The double vowels of several of these forms, *ui*, *ui* &c. are ancient *Libyan* (comp. the *Eg.* *def* and *unite*).

(f). In the *Agau* group *lo*, *la*, appears as the root, *lo-wa* *Waag* *Agau*, *la-gha* *Aguamider*, *la-gha* *Falasha*. The *Bornui* *la-ska*, *la-ka*, and the *Malagasy* *i-rai-kia*, *re-k*, are similar terms to the *Agau* *la-gha*.

In 6 (5, 1) the *r* becomes *n* (*ene*, *en* &c.) In the *Dankali-Kuafi* 6 the unit has a similar form (*leh* &c.) In *Malagasy* it is also preserved as a definitive, corresponding with the Semitic and African *le*, *re*, *la*, *na*, *al* &c. In the *Mpongwe* *na-ri* it takes the place of the common *Zimbian* *si*. The *Zulu* and *Kosah* *nye*, *i*, is probably the same root. It occurs in the *Mpongwe* line of *ina-gomi* 9. In 9, (1, 10) the form *la-ka* &c. occurs in *Bornui*, *Sangsadi* and *Mazambiki* ¶

(g). The *Bornui* *ti-lo* has the same form [*Agau* *lo*] with the dental prefix, a reversal of the ordinary collocation, similar to *ki-de*, *gu-di*, *ke-t*. The same collocation, with the guttural in place of the dental, is found in the *Bishari* *gu-r* of *sugoor* 6 (5, 1) and the *Mandingo* *ki-*

¶ Several liquid forms are given by Koelle, e. g. *wa* *no* *Okam*, *ke* *bo* *ne* *Nki*, *inga* *Kambali*, *unfi* *Yasqua*, *ko* *n* *Akurakura*, *wian* *Woloff*, *fa* *and* *Fulup*, *a* *nod* *Filham*, *ba* *ne*, *va* *ne* *Gadsaga*, *pu* *lofo* *Bona*, *pu* *laian* *Sereres*, *pu* *len*, *a* *len* *P. pel*, *pa* *ini* *Padsade*, *pe* *le* *Kisi*, *ke* *le*, *ke* *len*, *ke* *ren*, *ke* *den*, *i* *da*, *i* *ra* *Mandingo* Group, *pi* *n*, *Baga*, *Tunne*, *bu* *l* *Bulom*, *Mama*, *do* *Grebo* Group, *do* *Dahomey* Gr., *e* *ni*, *e* *ne*, *e* *h*, *e* *ne*, *me* *ne*, *i* *nye* *Yoruba* Gr., *ka* *lo* *Kaam*, *ka* *ni*, *ka* *n* *Udeu*, *we* *ni*, *ne* *ni*, *e* *nyi* *gha* *ni*, *gma* *ni*, *gma* *nyi* *o* *nyi*, &c. *Nusi* Gr., *pa* *le* *Mandara*, *bala* *Ede* (*Nu* *Gr.*) The liquid appears in these examples with variable prefixes *wa*—, *bo*—, *bu*—, *ba*—, *pa*—, *we*—, *me*—, &c.; *ka*—, *ke*—; *i*—, *e*—&c., like the sibilant and dental root. They afford strong evidence that the *ri*, *li*, *ni*, *nyi*, *no*, *lo*, &c. are but variations of the same root.

The form of the prefix serves to some extent to trace lines of special con-

Milchanang to the Singpho and Lau, could not have been exerted by a Tibetan tribe which was confined to the mountains, like the present western Bhotians and eastern Lhapas. Tibetans or Tibetanised Himalayans must have descended into Ultraindia or India and acquired a political and social predominance over a considerable area.

The second inference is that the diffusion of Tibetan elements on this side of the Himalayas has not been caused by a single movement of a Tibetan tribe confined to one era. These Bhotian irruptions into the sub-Himalayas and India which may be regarded as historical have produced a comparatively small influence. Although it has been continued until the present time, or for about twelve centuries at least, owing to the permanent advance of the Bhotian ethnic frontier into the sub-Himalayas, it has failed to assimilate the conterminous languages of that tract. From the Tibarkhad to the Abors a nearly uninterrupted band of languages is preserved, which retain non-Bhotian forms of pronouns and particles, and two thirds of the vocables of which appear to be non-Bhotian. Even the most eastern of these languages, as the Daphla and Abor, which are spoken by highly Bhotoid tribes, have a very considerable basis of non-Bhotian traits in phonology, glossary and ideology. In the Gangetic plain the influence of Bhotian has been still less. It is obvious, from these facts, that the pure Bhotian tribes and languages of the sub-Himalayas have always been separated from those of the plain by a barrier of only partially Bhotised languages. In Bhotan the influence of the historical Bhotian advance to the southward has been more powerful and extensive than in Sikim and Nipal, but the physical and linguistic character of the Bodo and Dhimal shew that beyond the mountains it was comparatively feeble and superficial. In the basin of the Irawadi and the connected western territory as far as Bengal and the Bay,—the tribes of which are entirely separated from the Bhotians by intervening ones and are less Bhotian in person and customs than some of the Himalayan tribes,—we find that the Naga and Yoma vocabularies are twice as Bhotian as most of the Nipalese. The Mishmi, Jili, Singpho, Naga, Yoma and Garo appear to have a direct glossarical connection with Bhotian—whatever may be the chronological and ethnic relation of the Tibetan movement which induced it—distinct from that which Tibetatised the more western languages. But to ascertain this relation satisfactorily it is necessary to advert to the non-Bhotian traits of the Naga, Yoma and of the Gangetic languages, and these will be discussed in a separate Section.

In the following details my principal object will be to shew the extent to which Tibetan enters glossarially into the languages of Ultraindia and India. In the comparative lists in the Appendix, compiled before the publication of Mr. Hodgson's Sifan vocabularies, I had indiscriminately entered all words that have Bhotian affinities. A few are thus included of which the derivation from Tibet may be doubted, Mid-Asian and other remote languages having forms that are nearer the cis-Himalayan, while others are given which now appear to be Sifan and not Bhotian. But making every allowance for these, this Section with the Appendix will afford a general view of the influence which the Sifans and Bhotians have exerted on the vocabularies of Ultraindia and India from the era when they first found their way across the snowy barrier.

3. Pronouns.

The Bhotian pronoun of the 1st person, *nga, na*, prevails in most of the Himalayan languages and in Ultradia, but as it is not common in the Naga dialects, it is improbable that the Ultradian *nga* is of immediate Bhotian origin. I should rather have supposed that in some of the eastern Himalayan dialects it was of Ultradian and not of Bhotian derivation. The influence of the Gangetic Bhotian of the Palra on the Burman family was far too slight to have extirpated the ancient Burman pronoun of the 1st person throughout all the Burman dialects. The Burman pronoun agrees with the Bhotian and Chinese (*ngo*) because all have ultimately derived it from the same mother formation.

The origin of the Ultraindo-Gangetic *nga, na* &c. has now been set at rest by the Sitan vocabularies.

The Bhotian 2nd pronoun, *khyod, khyo, khr*, has been carried by the Bhotians into most of the Himalayan languages, but not beyond them. This pronoun is of itself almost decisive as to the relation of the Ultradian to the Bhotian, and of each to the Gangetic languages. The Burman *nang, na* is found in several of the Naga languages, in Garo, Koda, Dhimal, Ahom, Mizo (*na, nan*), Dajla (*na*), and even in Magar (*nang*), one of many proofs of the connection between the pre-Bhotian Himalayans and the Burman family. The Mon and Kambojan pronouns, the former of which have spread into the Malay peninsula, are distinct.

The Bhotian 3rd pronoun, *kho, khu*, is found in several of the Himalayan vocabularies, but not in Dhimal, Koda, Garo, Naga or Burman, the prevalent forms being Sitan and Dravidian. The Singhpa *khi* is perhaps Bhotian, but as a similar particle is a common definitive (*s. g.* Kasia *ka* singular, *ki* plural) this is uncertain.

The Bhotian plural particles *nam, chay, day* do not appear to have made much progress in India, unless the Bengali *dig* is a derivative from the last. * The postfixed definitives *pa, na* &c. are found in several of the Himalayan and Gangetic languages, but not in the Ultradian. Most of the Himalayan possessives are apparently modifications of the Bhotian, but some may be Dravidian, the latter having a wide range of possessive particles. The extent to which Bhotian forms and particles have been engrafted on the Gangetic languages appears sufficiently from chap. IV., so that it is needless to pursue the subject here.

From the evidence of the pronouns it may be inferred that the Bhotian dialect intruded on a chain of Gangeto-Ultradian dialects which possessed the Sitan forms of the Chinese. Save in the vicinity of the southern Bhotian dialects, the Bhotian pronouns have made little progress. Even the highly Bhotian Takpa retains the Sitan-Ultradian 2nd pronoun and has not borrowed the Bhotian one from Lhopa. Changlo, like Koda, Dhimal, Ahom and all the proper Ultradian dialects, has the Sitan pronoun, and in the sub-Himalayan band the Bhotian appears not to be found to the eastward of Nepal. That the Sitan branch preceded the Bhotian even there and further to the westward, appears from Tibarkhad preserving the Sitan pronoun.

A full comparative list of the Sitan and of the allied Ultraindo-Gangetic pronouns has already been given in chap. V. sec. 11. Among

* Magar ku-rik. (See chap. V, sec. 11).

the correspondences there noted will be found the contracted form *a* of the 1st pron. common to Manyuk, Angami Naga and Mikir; *ang*, the Gyarung postfixal form, found as a postfix in Naga and as a separate form in Bodo, Garo and Kiranti; *ngo* Takpa and Singto; *ka* Phochu, Dhimal, Lepcha, Lau (*kha*, *kau*, *ku*), Young Lho, &c. Most of the Utrai Indo-Gangetic forms of the 2d pron. are Sitan, *nan*, *na*. The Manyuk variation of the vowel *o* to *o* is found in Daphla, Abor, Deoria Churia, Angami, Mozome Angami and Namsa-gya. The other Sitan particles are also Gangetic-Utrai Indian. I add a few examples.

The Gyarung particles occur in Utrai Indian languages. *Ma*, *m* &c. is common as a negative and carative postfix or prefix (Abor, Dophla, Dhimal, Mikir, Garo, Burman &c.). The Khamti *ma-mo-*, and Chinese proposed *m* &c. is the same particle. *Da* denotes the present in Abor as in Gyarung, and a Gyarung-like combination of it with *la*, another form of the same Bhotian definitive, renders it emphatic, *luda*. In another form, *ta*, it is copulative, corresponding with the Gyarung *ta*, past. In the Dophla perfect *puna* a combination occurs similar to the Gyarung, *pa* by itself being future in Abor (in Dophla *bo*). Changlo has *-la* present, *-ba* past (Burm. *ba*), *-dang* future (Burm. *tho*, Khamti *la*—). Bodo has *-dang* present (used as a verb subs.), *ba*, *mi*, imperfect, *dang-man* perfect, *nise*, *gan*, fut. Dhimal has *hi* past, *hi*, *mi*, *hi* present. Garo has *-na*, *-enga* present, *enga-chim* imperf., *-a*, *-na* perf., *-chim* perf. def., *esa*, *heng*, fut (Bodo). Naga has *-t* perfect, *la*-prefixed, with *-t* postfixed, as a second perfect (Abor, Gyarung, so in Tibetan &c. pref. with *-s* postf.), *i* is future. Mikir has *-loh* past (Naga, Kas.), *-ye* future (*i* Naga), *-bo*, *-bang* emphatic futures (Abor, Daphla, so Burm *mi*), *-si* participial (Gyarung). Garo has *-na* present (Gyarung *na*). Kasia has *la*-past (Mikir, Naga, &c.), *n*-future. In Singpho *-ha* is past (Dhim. *-hi*, Bhot. *-s* also *ha*, *h-ha-dai* perfect; *-a* future (Bhot *-a*).

Takpa being at present the only known language that appears to be continuous with the proper Tibetan dialects on the one side and with the Utrai Indo-Gangetic on the other, it will be useful to advert to the affinities of its pronouns and particles. I add the numerals to give greater breadth to the comparison.

As Takpa is the language of the Towang raj, it must be continuous with some of the dialects of the Bor and Abor tribes*. At present we are only partially acquainted with those of the southern Aka, Daphla and Abor-Miri. The two first appear to be the same and to be closely akin to the last. How far they are spoken to the north, and whether any other dialects exist between them and the Takpa, is not known.

*. Are the Tag *ab* or Tag-*ab*, one of the tribes of Bhutan who inhabit the district of Tag-na, or Tag na, Tigana or Doka, not a section of the Tak-pa who happen to be under the dominion of the Deb Raj? (As. Res. XV, 146, 149 Pemberton 111). The Pilo of Tag-na's territory "lies between Baksha and Cherang. He has two Dwars or passes, and the Refu Jedu and two Guoas are under his orders. His territory is eight days journey long and four days from east to west. He pays altogether annually in two instalments about 3000 rupees and rules about 3-16ths of the country" (As. R. XV, 139).

The pronouns of all these dialects are Sifan-Ultratidian. The 1st is *nge*, *nye*, in Takpa, the vowel being exceptional. The East Mishmi *ke* appears to be a variation of it. Daphla and Abor have *ngo*, the Chinese form,—the Sifan and Bhotian being *nga*. Mishmi has *ha*, the Manyak, Naga and Mikir *a*. The 2d has the Chinese form also found in Horpa (*ni*), but contracted to *i*. Daphla and Abor have *no*—the Manyak form—and it is also possessed slightly modified by the Western Mishmi, *nye*. The 3d in Takpa is *pe*, *be*, which is not Sifan but Chinese and eastern Mishmi, *we*. The labial is also Daphla *ma*, and Abor *bu*. The Western Mishmi combines it with the dental *ma*. The Takpa pl. postfix is *-ra*, the Daphla *lu* (a var. of the same particle), the Abor *lu* or *lu-ke* (comp. Horpa *ri-gi*; *a-rang* is another Abor form, and the Mishmi *long* corresponds with it. E. Mishmi has *thal* (comp. Singpho *theng*, Angami *toleli*, Tengsa *khala*) &c. The Takpa poss. is *-ku*, the Daphla and Abor *-g*. The Takpa dative is *sga*, *la*, the Manyak *we*. Daphla has *-bo*, Abor *-na-pe* or *-ke-pe* following the poss. (*-g-kr-pe*), *bo* and *pe* being the same as the Manyak *we*, and *na* the Takpa *la*, Horpa *da*, Bhotian *na*, *la*, *da* *ra*. The Takpa ablative "from", is *i*, which may be a contraction of the Manyak *ni*, Chinese *li*, Bhotian *ne*, *di-ne*. Daphla has *-g-gu-m*, Abor *-g-ke-m*, or *-g-lo-ke-m* (*-g* poss., *-lo* locative), in which *ga*, *ke* are Horpa, *gha*, Thochu, *ge*, *k*, Changlo *gai*, Burman *ga*, Garo *-ni-kho*. The instrumental is in Takpa and Gyarung *gi*, Bhotian *gi-s*, Abor *-ko-ki*, in Daphla *-ma-na* (following the poss. *-g-*), comp. Sunwar *ni*, Limbu *nu*, Lepcha *nan*, Burman *sheng*.

The numerals present some coincidences. The 1 of Abor *a-ko* may be the Manyak *ta-hi* and Thochu *a-ri* (not Takpa *hi*, or Gyarung *ka-hi*), but as *a-* is a prefix and *-ko* a postfix in the other numerals, the root appears to have been lost in 1, although it is preserved in 6 *a keng ko*, and in the adjacent Changlo dialect of Lhopa, *khung*. Daphla retains it in 1 *a ken*. 2, Daphla *a-ni*, Abor *a ni ko*, is Bhotian, Naga, Himalayan; Takpa has *nai*. 3, D. *a am*, A. *a um ko*, Takpa *sum*, Gyar *sam*. 4, D. *a p li*, A. *a p i ko*. (Changlo *ph i*), T. *p li*. 5, D. *a ngo*, A. *a ngo-ko*, *u ngo*, *pi li-ngo-ko* (4 repeated), T. *li-a nge* (4 repeated). 6 D. *a-k-p-le* (*a-k*=*a-ken* 1, *p-le* properly 4, but here contracted from the original full form of 5 *p-li-a-nge*). A. *a-keng-ko* (the 1 of D.), Changlo *khung*. 7 D. *ka-na-g*, A. *ki-nit-ko*, *ku-nid-e* (Burm. *khu-nhit* in 2 *nhaik*, *nhaich*=*nag* of D.) T. *nia* (2). 8, D. *plag-nag* (4, 2), A. *pi-ni-ko* (4, 2). 9, D. *kyo*, Lepcha *kyot* (nearer to the Chinese *kiu*, *kien*, *kau* than the common Tibeto-Ultr. *gu*, *ku* &c.), A. *ko-nang-ko* (? Gyar, *kung-gu*). 10, D. *rang* (Karen lang 1). A. *ying-ko*. It may be inferred that Takpa has a close special connection with the Daphla and Abor, but that the period of their separation was very ancient. The southern dialects retain some archaic full forms not now found in Takpa or the Sifan languages, and they have non-Takpa traits in common with Bhotian, and with Sifan and Ultratidian dialects.

4. Numerals.

1. The Bhotian *gchig* is the original of the Murmi *ghrik*, of which the Gurung *kri* is a contraction. The Bhotian sp. *chik* is found in *Sar-pa*. Lhopa has *chi*, and Newar *chhi*. The Limbu this preserves the Chinese *shai*, and the Takpa *chi* is a contraction of a similar form.

The Naga *ka-tang*, (*ka-t* in higher numbers), *ka-tu*, *a-kh-et* (? *a-khet*)

and it is preserved in the Kisiu idiom. Other Nigerian forms are *e-pa* Akongo, *ba* Camarcons, *e-bi* Kerapoy, *e-ba*, *u-ba* Kacuba, *ma* Calbra, *i-ba* Moko, Kaylee, *ba-ba* Bongo, *be-ba* Batungu, (*be-lai* 3, *be-nai* 4), *be-be* Panwe, *be* Binu, *a-bo* Iba, *a-ua* Whidch, *a-uwi* Papah, *e-mo* Akripon. The prefixal *be-* of the Pongo forms is repeated in some higher numbers. In a few of the more northern languages it is used in 1 also. In 2 it is combined with a nasal root. Ashanti *e-bi-en*, *a-bi-en*, *mi-eni*, (1 *mi-ch-a*, *bi-ak-ung* &c.)

Amongst the purely labial forms common to Hausa and the lower Nigerian languages, the full or compound form *ba* is found in Nuß *ogu-bar* 2 (in 7 it becomes *bi*, *ogu-twa-bi*). Shabbe *huo-war-ba* 2, *han-ah-wara-bar* &c. 7, and Binu *a-boar* 2. These forms suggest that the Woloff and Nubian *ar* &c. of *ni-ar*, *ar-o* &c. is simply a contraction of *bar* &c. This is supported by the Tumali *ar-ko* 1, *mar-ha* 7, Koldagi *te-lad* 7, Dalla *bai-de* 7, (*belle* 2), Shangalla *am-band* 2. The Koldagi *te-lad* of 7 and the Dalla *belle* 2 are Zimbrian and Mandingian forms (*bili*, *tele* &c.), corresponding with the Shiho *mel-ben*, Darakil *mel-bene*.

(b.) With the contracted Tumali *ar-ko*, Koldagi *ora*, Kensy *ow-nm*, Nuba *ow-gha*, Daxur *on-wa* must place, on the one side, the Kuafi *ari* and, on the other, the Woloff *ni-ar* and Tembu *na-ali*. In these Nigerian forms the nasal is a prefix as in the Woloff *ni-at* 3, *ni-ane* 4; Tembu *na-dose* 3.

(c.) In the Galla family a labial follows the liquid instead of preceding it as in Zimbrian. In Bishari a labial both precedes and follows the liquid. Bishari *malub*, Dankali *lume*, *dume*, Saumali *lebe*, Shiho, Galla *luma*, Wadita *nama*, Wadita, Woretta *lila*, Agan *lunga*, *linga* (in 7 also *lu-ma*), Malagasy *rua* or *ru-wa* [in Asonesia *ru-a*, *du-a* or *du-wa*, *lu-wa*, *nu-wa*, *du-ba* &c.] The Bishari *sub-awb* may be of W. Nilotic origin through *dum. lab* (*malub*) &c. The anomalous Yangaro *lep* may also be a modification of a term having a similar origin [Saumali *leb*].

The Galla-Malagasy terms *lab*, *lume*, *dume*, *rua* &c. resemble the Indo-European *d-wa*, *d-wa*, *d-uo* &c., Lazian *ku-wa*, Ugrian *k-av-to*, Turkish *d-wa-ti* 4 (i. e. 2 dual), and also those varieties of 2 and 4 which have a final *v*. Scythic, Caucasian, Indo-European. The collocation of the two elements and the vowel *u* distinguish the Galla-Malagasy from the Zimbrian forms, and might appear to connect them with the Indo-European. But as the Bishari *malub* appears to be the full original form, these terms admit of a somewhat different analysis, and one that reduces them to an archaic variety of the common African numeral. In the archaic Semito-Libyan formation the labial was a determinative as in Caucasian and Scythic, and it was also a numeral element. (See the remarks on the Semitic numerals). In Semito-Libyan as in Caucasian it was used prefixally as well as postfixally, and Scythic, like Droyro-Australian, had archaic determinatives and units in which the labial was either initial or prefixal. In Bishari, as in some other Semito-Libyan languages, the labial is still common as a prefix, and its ancient prevalence in the Nilotic province is attested by its use as a postfix in Dankali and Shangalla, (corresponding with the Hottentot usage), as a prefix and postfix in Berber &c. In Bishari it has the vowel *o* (*wo*, *om*, *o*), and in Dankali, Shiho and Arakiko it sometimes takes the forms *ub* and *um* as a postfix. Danakil are

ab "milk". Galla *an-ab*; *gell-ab* "the body"; Aya *a-hel*, Tigre *a-kal-at*, Gafat *a-kal-at-an*; *kull-am* "fish"; Adiel *kull-am*, Harar *tul-aa* Arkiko *mud-af* "sheep"; *imroo*; Adiel *kok-ab* "stars"; *gell-ab* "hair", gura Shiko; *ker-ab* "near"; *ber-ab* Shiko; *rak-ab* "camel"; Shiko *re-ku-be* Danakil, *raki-ba* Adiel; *li-ab* "teeth" Arkiko, *li-gh* Saumali, *li-ku* Falasha; *arr-ab*, "tongue" Saumali, *ar-aba* Galla, *ar-at* Harar. The Bishari 2 is probably therefore an archaic form of the numeral as it existed in the Gafat family, and the correct analysis would appear to be *mal-ab*. This is confirmed by *seru-ma-5 7* (5, 2) in which the labial keeps its place as the root, and by the 7 of Shiko, *me-tan*, and of *tanash*, *mel-nene*, in which the root has its full form, and which I have already associated with the common African bar, *hel* &c. 2. The Shiko and Danakil preserve the same root for 2, *bahr*, *bahara*, and it is also found in *Mangma*, *yal-ae*. The Shungalla numeral 1 is a similar example of the labial occurring both as an initial and final. The Galla 7 also retains the labial postfix *-ba*. The Bishari *mal* may therefore be considered as simply a variation of the labial form of the common African 2, *bar* &c. The terms under (a) would thus appear to be *mal-ab*, *lu-me*, *du-me*, *le-ba*, *lu-ma*, *na-ma*, *la-ha*, *la-nga*, *li-nga*, in which the root vowel sometimes takes the slender form as in the Galla *le-le*, Zimbari *bi-bi* &c. The Malagasy term, in like manner, becomes *rua*, which approximates to the archaic Semitic form of the same term lost in 2 but preserved in 4 (2 dual) *ar-ba* &c. The Turali *ar-am* 4 preserves a form of the original postfix similar to the Galla *-ba*, *-ma*. Amongst the current Semitic terms for 2 Hebrew retains a labial postfix. In the historical condition of the Semitic languages the numerals, save 1, are substantive not qualitative. They have different forms for masculine and feminine, the fem. being, however, used for masculine words, and the other form, without the fem. final, for fem. words. As the numeral postfixes must have been originally qualitative, it is probable that in the era of the Semito-Libyan Association when the sexual variations of the definitive were in full use, the unit took all the definitive postfixes, and the higher numbers all those which had a plural application. The labial was masculine and plural, although originally singular or indefinite; the liquid *l*, *n*, *r*, *d* was also plural; *i* fem. and plural; *u* plural &c. In the most archaic period the unit probably itself varied with the sex. The dental and sibilant def. may have been the fem. unit, and the labial the masc., and in the higher numbers which were but compounds of units, the distinction may have been maintained. Those terms in which the labial occurs as a root or postfix were probably the original masculine numerals. Their obscuration, concretion and loss is a phenomenon similar to the decay and loss of the masculine definitive in the glossaries generally, save in Hottentot, and the persistence of the feminine. It seems possible to explain in this mode the original currency of two terms for 2, *ba-ri-ba*, *ba-r-ba*, *ma-ab*, *bi-ri-ba* &c. masc. and *sa-en-te*, *ith-ma-ni*, *o-il-il* &c. fem. The vowel may also have even in these archaic form had a sexual power bar, *la-to* &c. being a common and *ba-ria* fem. form. The masc. labial root they have been the principal term when the Semitic system was first carried to Africa, although the fem. root afterwards became the more important in the Semitic languages.

It is clear, on a comparison of all the Semitic and African terms, that the ultimate archaic root is the liquid—*no*, *he*, *m*, *nan*, *na*, *roh*, *u*, *r* Semito-Egyptian; *li*, *li*, *le*, *la*, *r*, *l*, *de*, *te*, *del*, *so* &c. African—; that it was

early combined with the labial and with the sibilant (dent. cat. &c.) def. probably, partially, or both; that the form with the added *proo* became one of the most prevalent in Africa, the prefix early combining with the root, — a secondary prefix, labial &c. being assumed in some languages, and the root itself being thrown off in several.

With the aid of Koelle's Voc. a list of the principal variations of the Semite-African numeral may be given.

The root has the variations *na, ni, ne, nu; la, li, le, lu; ri, re, roh, ru; di, de, ndi, du; na, ni, i; sa, so, si, sei, se, de; ka, ga*. The actual forms are:

1st, the pure root, with the servile particles thrown off, as *ndi* Bamui, *le* Gurma, so Grebo group.

2d, the root with serviles, as *e-dsi* Aka-Igala gr., *n-le*, *le-a* Kasm &c., *i-le* Kambali, *ya-r* Woloff, *a-ro* Nubian, *rua* Malagasy.

3d, the reduplicated root, *di-di* Fulah.

4th, the root with the labial prefix, *bi-ni, bi-ri, va-li, ni-di* Zimbabian, *be-le* Dalla, *fi-la* Mandingo, *ma-dsi, ma-do* Aka-Igala gr.; the same form with the labial postfix *ma-lu-b* (or *m-al-ab*) Bishari, *bi-ne-b* Bute; with the guttural postfix, *ma-r-ha* Koldagi (7), with the dental postfix, *fi-l-ad* Koldagi (7); with a secondary labial prefix, *bi-ma-de* Songo; with a secondary dental, sibilant, guttural or liquid pref., *si-vi-si* Mundu, *tem-be-re* Ayamban, *e-bi-en* Ashanti, *q-ba-n* Dsarawa; with the liquid final, *ma-ra-n* Landoma, *ji-ri-n* Mandingo, *pe-ra-n* Timni, with the root elided, *be, i-be, a-fa, e-la, mba, pa, pi-pa, ba-lu, be-fe, e-wa, v-ve* &c. very common in the N. W. Zimbabian pron. (Isawu or Cameroons-Ghan, the Calabar and Lower Nigerian groups, thence inland over the Chadda basin to Sudania including Hansa, and westward in the Dhom y group).

5th, the root with the sibilant, dental or guttural prefix, *she-ne* Hebrew, *s-roh* Mahrah, *s-nau* Egr., *si-n* Shilluk, *di-si-n* Kaudin, *hi-le* Arkiko, *ke-le* Musantandu, *zo-le* Basande, *ka-t* Angola, *ti-el* Gura; the same form with postfixes, *ith-na-ni, ath-in-t-an* Ar. *she-nem* Hebrew, *tha-na-t* Berb., *s-nou-s* Egr., *ke-ta-b, ngi-ta-ba, ke-ta-w* Bohn gr., *ti-ni* Mampa.

6th, the root with a labial postfix, *lu-me, du-me, le-ba, lu-na, na-ma, Ga-la* group &c., *na-b* Burmanid. with the liquid postfix, *lu-ga, lu-na* &c.

In the Vilham *lu-ga-am* the root is gutturalised. The serviles connect the form with the adjacent Balla *ke-ta-m*. The Fulah *ju-ga-p-ten* is the Vilham *ga-ra* with a superadded postfix and with the labial in place of the guttural prefix. In the variation *fu-ten* the root is ejected. In the Limba *tae*, *kae* the variation of the root consonant from the dental to the guttural also takes place. The Bidsago *mund-su-ne, i-so-be, Bulanda q-si-b-a* are allied forms, and tie so of the Grebo group is connected with them. The Baghermi *su-b, sa-b, sa-p* is a Mid-African link between this detached and peculiar Senegambian group and the Bedari-Galla, with its *ba-b, du-ne* &c. The line of diffusion thus indicated must have preceded the advance of the Zimbabian forms from the south into the Nigerian, Chadda and Sudanian provinces.

Foreign Affinities.

A. See Semitic.

B. The Dravide-Australian *ba, ba-b, la-ba* &c. are anacronisms. In the other Asiatic systems the labial initial is not prevalent. The second and radical element *li, le, ri, re, ni* &c. is very common. With the

sibilant definitive and unit prefixed, it occurs with the same slender vowel in the Semitic *is-in-*, *she-ne* &c. (the *in*, *ne* generally changing to *il*, *li*, *le*, *li*, *ri* &c. in African languages), in the Caucasian *shi ri*, *o-ri*, Sanskrit *si-ri*, *si-de*, Chinese *il*, *ni* &c. The Kongo terms favour the inference that the African liquid element is the same as the Scytho-Semitic and Caucasian. They even tend to show that the term was received from a Caucasian language. But it is more probable that in the original Asiatic system, as in the Zimbrian, the labial definitive and unit was preserved as the initial in some varieties of 2 as well as the sibilant, guttural &c. If so, the African *bi* &c., like the Dravido-Australian *bar*, *ba-ri*, *ba-ri* &c., is a remnant of a form once prevalent in Asia. The Caucasian *wi-ha* (Abkhasian), an Euskarian *bi*, are similar remnants, the former having the labial postfix *asin* the Malagasy term. In many Scythic terms and in the Indo-European the labial element keeps its ground with more or less prominence and tenacity. But in these terms the labial has another definitive unit (dental, guttural &c.) prefixed (H. Japanese preserves the labial in 2 as in 1, 3 and 4 (1-to 1, 3-to 2, 3-to 3, 3-to 4). The closest forms to the Zimbrian are preserved in the Scythic and N. E. Asian 1, 5, 10 &c. *bir*, *pir* &c. 1 (Turkish), *mill* &c. 5, 10, Koriak, *mer* 10 Tungusian. The only N. E. term that preserves this form in 2, and thus corresponds with the Dravido-Australian and Zimbrian, is the *mallo* (Esquimaux) *mal*, the broad vowel being Dravido-Australian and Nilo-Nigerian but not Zimbrian. Hence it may be inferred that its dissemination as a term for 2 was very archaic. The Kongo-Angolan *so-li*, *ko-le*, *ya-ri* closely resemble the Semitic form, and still more closely the Georgian *o-ri*, *shi ri*, *ye-ri*, while all have Scythic affinities. They strongly support the opinion that the liquid is the essential element in the term, and that the contracted forms *ni*, *li*, *ri*, *li*, *ri*, *li* &c. are a return to the ultimate root. The Zimbrian and other similar African terms appear to be related to the current Semitic not directly, but through their mutual derivation from an archaic Semitic or Semito-Libyan mother-system, analogous to the Caucasian and Scythic.

The broad and widely spread Nilo-Nigerian form, *mal*, *bar*, *ba*, *ar* &c. is merely a variation of the slender *bi-ri* &c., and it is probable, from the Kuan and Toton terms, that the full form was *ba-ri*, the liquid having the slender Asiatic vowel as in Zimbrian and the vowel of the labial corresponding with that of the Kongo-Mpongwa form of Zimbrian, *va-li*, *ba-mi*. But whether the broad form of the labial was a distinct Asiatic importation and directly connected with the archaic *mallo* *ma-li*, Dravido-Australian *ba-ri*, *ba-ri*, or was merely an African modification, is not clear. In Asia the broad form appears to be the more archaic, the vowel in the slender forms having assimilated to that of the conjoined definitive in *li*, *li*, *ri*, *li*, *ki* &c. It is probable that in Africa also the form *bi* &c. was secondary and primary, in which case the eastern *ba-ri*, *va-li* would be the original Zimbrian form; but the Caucasus-Euskarian *bi* suggests that *bi* may also have been imported from Asia. In the Semitic terms for 2 the same assimilation of the vowels of the two elements is found. In the Semitic 4 the broad vowel of *bar*, *mar* is preserved in the contracted form *ar*, while the form of the labial 1 *mal* is identical with what appears to have been the older African form.

Obs. on the Distribution of the terms.

1st. The broad forms *ba-ri*, (*ma-li*) *ma-ri*, *du-ma*, *ru-a*, *sa-ô*, *su-ô*,

so-sa &c. appear to have been the first that were very widely disseminated. They are the most prevalent in the Nilo-Malagasy and Nigerian provinces, and in the N. W. division of the Zimbian. The broad form was probably received from the Semitic province before it was replaced there by the present Semitic term. The slender variety *hi-ri* was probably diffused at a later period by an influential Zimbian dialect, as it is the most prevalent in the east and south divisions of Zimbian. But the *Dankali*, *Saumali*, *Dalla* and *Koddagi* forms appear to show that it did not originate in the purely Zimbian province. In the west the later forms, and contractions of them, have spread northward, displacing the older varieties in most of the Nigerian groups.

2d. The historical Semitic terms are evidently comparatively recent in Africa and have made little progress. The Abyssinian, Egyptian and Berber mark the oldest diffusion of the Semitic forms.

Three.

The African terms for 3 are remarkable for their adherence to one ultimate root, and for that root being the same as the Semitic.

A. *sho-men-t*, *sha-me-t*, *sho-m-t*, *sho-m-ē-t*, *sho-m-te*, Egyptian. [See Semitic]. The Bishari *mih*, in 3 *su-mhai* (Semitic, Eg.), preserves the labial.

B. (a) *tha-lä-th*, *sa-la-tha*, *sa-la-sa* *fem.* *tha-la-tha-ta* *masc.* Arabic, *shä-lō-sh* *fem.* *she-lō-shäh* *masc.* Heb., *si-lä-sa* (30) Babylonian, *te-la-tu* *masc.* *te-la-t* *fem.* Chaldea, *se-le-ste* Tigre.

(b) *ke-ra-d* Berber, *k-ra-t* Shillah *ka-rä-d* *kandin*, [See Semitic]. (b) is a variation of (a).

(c) *tha-th-it* Mahrab, *tha-k-it* Gara, *shi-sh-ti*, *shi-sh-et* (*sa-sa* 30, *si-sa* 60) Harragi, *su-s-t* Amharic, *to-s-h* Nubian, (*sa-sa* 30 *Gafat*, *sa-aso*, *sha-shu* 30 *Gonga*.) The Mahrab, Gara and Harragi forms correspond with 6 (3 dual) not only in these languages, but in Arabic and Hebrew (which drop the *h*, *l* of 3). The Babylonian 3 is not ascertained, but in 30 it has the Arabic form. In 60 however a more archaic form is preserved, *su-su* [Heb. *shish-shi* 6, *shish-shim* 60], or *su-si*, which corresponds with the Amharic *so-s* of 3, (Harragi, *Gonga* and *Gafat* 30), and indicates the former existence of a similar term in the Himyaritic province. The definitives and 3d pronouns in *su*, *so*, *hu*, *ho*, *tu*, &c. render it probable that this was the oldest form of the Semito-Libyan unit, but those in *a*, *i*, *e* may have coexisted with it from an ancient period. Both are found in African terms for 3 and other numerals. [See Semitic]

The Himyaritic double dental or sibilant, or dental followed by the guttural, is similar to the most widely prevalent African terms.

Galla family, *su-dde* Danakil, *su-d'de* Saumali, *se-dde*, *sa-di*, *za-di* *Galla*, *a-dde* *Shiho*, *se-ze* *Dalla*. From the *Galla* and *Dalla* forms and the absence of the infixed *la*, *lo*, these terms appear to be of Himyaritic origin.

Zimbian family, *ta-tu* *Suabeh*, *i-ta-tu* *Ki-Kamba*, *ha-bu* *Ki-Nika*, *i-ta-tu* *Makonde*, *ga-ta-tu* *Mudjana*, *ta-tu* *Masena*, *Sofala*, *Kosah*, *ma-tha-tu* *Zulu*, *ta-tu* *Benguela*, *Angola*, *Kongro*, *Kambinda*, *sa-tu* *Bondo*, *bi-te-tu* *Mundjola*, *ta-tic*, *tu-ta*, *Fulah*, *mba-ta* *Tumali*. These forms are allied to the Himyaritic *tha-th*. A second variety suggests that both, although cognate with the historical Semitic, have an older common source—*ma-ra-ra* *Makua*, *vi-ra-ra* *Takwani*, *tha-ra* *Mazambiki*, *tri-ra-ra* *Delagea*

Bay, *ti-nha-ro*, *gi-na-ro* Nyambana, *ta-ru*, *tha-ro*, *ba-ra-ro* Sechuana, *t-no-rra* Hottentot, *a-ru-se* Hot., *be-la-la* Panwe, *ba-la-li* Bonga, *me-le-la* Camaneons, *bi-ra* Akuonga, *la* Binin, *ra* Bellon, *ntsha-ra* Rungo, *te-re* Calbra; *ti-lu*, *ta-lu*, *te-lu* Malagasy. The chief peculiarity of the Zimbian terms is the final vowel *u*. In *ta-tu* it does not correspond with any Semitic form, but as this form without the *l*, *r* is simply the double definitive and unit, it may be referred to an archaic form of it similar to the Mahrah and Gara *ta-ut* 1 and the Babylonian *su-su* 60. The *u* of *ta-ru*, *tha-ro*, *ta-lu*, *te-lu* &c. corresponds with the Hebrew *lo* in *sha-lo-sh*, as the initial definitive and unit does with the Arabic *tha-la-th*. The same form of the liquid element is found in the Mahrah and Gara *roh* of *o-roh* 2, and in the Malagasy *wa-lu* 8 and *fu-lu* 10. It is probable, from the variation of *th*, *s*, *t*, to *r*, *l*, occurring both in the Semitic and Zimbian terms, that the latter was not the plural def. n. &c. occurring in 2, but merely a phonetic modification of the former, as in the Panwe *va-ta* 1, which becomes *va-la* in 6 (6, 1). *Su-su*, *tha-th*, *ra-ro*, *la-la* &c. are forms strongly presumptive of the original term having been a reduplicated unit, for they are found in widely separated branches of the system. Such forms as *tha-k*, *tha-ra*, *tha-la*, *ta-lu*, *na-ro*, *k-ra*, &c. appear to be only variations of the original term. Similar variations occur in the allied N. and E. Asian terms [See Semitic Numerals, 3 B.]

The Gonga, Agau and Nubian terms appear to belong to a later era,—that of the extension of Hinyaritic to Abyssinia. The Nubian *to-s-k*, *to-s-ho-ga* (double postf.), *tow-s-ho*, *to-dje*, are Hinyaritic or Babylonian through Abyssinian (Auharic *so-s-t*, Gafat *so-s-ta*). The Tembu *na-do-so* is evidently of Nubian derivation. The Tumul *nda-ta*, although resembling the Zimbian forms, appears from its final vowel to be Semitic. The Fulah *ta-tie*, *tu-t*, appears to be also Semitic through Galla *sa-di*, *sa-de*. In Berber the 1st *th*, as we have seen, is hardened to *k*. Some of the Hinyaritic dialects appear to have hardened the 2nd *th*, and to have transmitted this form to Africa. The Gara (Eklili) *tha-k-it* preserves the Hinyaritic source of the Agau *sha-k-wa* (*wa* is a Libyan definitive postfix, replacing the Semitico-Libyan *-t*, *-d*, as in the Agau *io-wa* 1, *ak-wa* 5), Agramader *shu-gha*, Falasha *si-gha*, Shangalla *u-ka-g* (both dentals hardened). The Gonga group has *ke-s* (*k* for *th*, *t*, as in 2, and as in 3 of the Dalla 8.) *he-za*, *he-dza*, *he-dja*, *se-ke-che*. If the last form (Kaffi) be the full one and the others contractions, the *-che*, *-ze*, *-dza* is the def. postf., and *se-ke* the root, corresponding with the Agau forms and with the Gara *tha-k*, the *a* of *tha* softend to *e* as in the Hebrew and Chaldee forms. The Shangalla form corresponds with the Kruai *o-ku-ni* and represents the Nilotic parent of the Sudanian *u-ku* (Hausa), *wu-ku*, *bu-ku*, *ya-ku* (Bornu), *Pika* &c. *ku-wa*, *a-ko-an*, *ko*, Buduma *ka-ke-ne*, *ke-ne* &c., as the Agau does that of the Mandingo *sa-k-wa* (Vei), *sa-k-a* (Susu), *sa-g-i* (Jullunkon, in 8), *sa-be*, *sa-wa*, *sa-bi*, Sorakeli *si-ka*, and of the forms in *sa*,—Darfur is, Enghedesi *ayia-sa* (*ayia-ka* 2), Fanti *e-bi-sa* (*e-bi-en* 2), Fetu *a-bi-san*, Akim *bi-an-sang*, Mutu *a-ssah*, Avekwon *a-za*, Amina *e-sa*, Akripon *i-san*. Dental forms of these syllabets also occur in Nigeria. Woloff *ai-at*, Kruai *ta*, Tambo *e-ti*, Ibo *a-tu*, Papa, Whidah, Grelm *tuh*, *a-ton*, Moko, Karaba *i-ta*, *e-ta*, Karapay *el-ton*, Panwe *tayh* [Shiho *a-d*], Yoruba *ma-i-ta*. The Begharmi *ma-ta* is a similar variety.

Köelle's vocabulary gives numerous West and Mid African varieties of

the Zimbrian forms, *tati*, *tat*, *ata*, *ita*, *eta*, *eto*, *ta*, *esa*, *cha*, *nta*, *bata*, *meta*, *guta*, *kotatu*, *bitate*, *batet*, *dsitadu*, *belaro*, *pelaio* &c. &c.

Foreign Affinities.

A. The Egyptian term is Caucasian &c. (see Semitic), and its disuse not only in the Semitic but in the African 3,—although preserved in the Semito-Egyptian 8 (5, 3),—is equally remarkable with the almost universal prevalence of B. in the Semitic and African languages.

B. The affinities of this double unit are indicated in the Semitic list. It has only one representative in Caucasian; but it is Indo-European in the *t-r* form, (which is the Scythic *k-r*, *k-l*), and Scythic in the *t-t*, *t-k*, *s-t*, *s-s*, *k-r*, *k-l*, *h-r*, *g-r* forms. Its wide prevalence in the S. W. portion of the Old World, (Indo-European, Semitic, African), and the circumstance of its having apparently supplanted the older Chino-Scythic term preserved in Caucasian and Egyptian, render it probable that it early became appropriated to 3 in the numeral system of an influential and diffusive South Western race. In 1 the same double form occurs in Caucasian systems, *zi-a*, *ho-s* &c. In Semitic it may have been *fem.*, and *sho-in masc.*

Obs. on the Distribution of the terms.

Following the analogy of the glossary generally, and on historical probabilities, it may be concluded that the terms similar to the Arabic, such as the Berber, are the latest Asiatic importations,—that those similar to the Himyaritic, such as the Nilo-Nigerian *sha-k* &c. and the Amharic and Nubian *so-s*, *to-s* &c., belong to the Himyaritic era,—and that the prevalent and widely diffused *ta-tu*, *ta-ru* &c. belong to more archaic ages, like the common African terms for 2. They are probably of common origin with Semitic, rather than of Semitic origin. The Egyptian 3 appears to show that when it was received from a Semitic language, the Semitic family had a greater variety of terms for 3 than it has had in later times. * In Zimbrian the forms *ta-tu* and *ta-ru* appear to have co-existed, and they probably did so in the earlier Semitic ages also.

The wide dissemination of the forms *tatu*, *taru*, *raru* &c. was probably effected by the great Zimbrian movement.

That of the several Nilotic forms indicates important movements of Nilotic tribes to the westward, subsequently to the Himyaritic era. The Amharic forms of Himyaritic have been carried to the Nubian tribes, and thence to one at least of the Nigerian tribes. The Agan forms—corresponding probably with the original full forms of Gonga, Shangalla and Kwadi—must have been carried westward by an influential or dominant tribe, for they are more widely diffused in Nigeria than any others. The Mandingo tribes are probably the modern representatives of this great Nilotic movement. The Fula movement appears to have been a later one, and the term for 3 concurs with other geographical facts in indicating that the influence of the Galla migrations and conquests extended at one time into Sudania, and was thence transmitted to Nigeria.

* In the pre-historic era of the formation it is probable that Semitic had more dialects than in after ages. The more barbarous the tribes, the greater their segregation and the more numerous their dialects; and the capacity of the family glossary for variations in the forms of roots and their compounds, depends on the number of dialects.

The powerful diffusion of Hymyaritic terms by different streams appears to show also that the Nilotic tribes received a great impetus from the civilisation and energy of the Hymyarites or an earlier Shemo-Hamitic race. The Galla, Fulah and Mandingian tribes probably derived from them something of their physical superiority to the purer Negro races.

Four.

A. (a.) ar-ba-ud Mahrah, Gara, ar-ba fem. ar-ba-ta mase. Arabic, ar-ba-ah mase, ar-ba fem. Hebrew, ru-ba Babylonian, ar-bea mase, ar-ba fem. Chaldee, ar-ba-ti Tigre, ar-ba-ta Gafat, ar-at, ar-ut Amharic, ar-at Harragi, u-lah Arkiko, ar-um Tummali, ra Ballona, e-re Yebu, perhaps Zimbrian].

(b.) a-ta, t-tu Egyptian, fan-so Tibbo, a-fu-r Saumali, se-re Dankali, (bahr Shiho, baha-ra Dankali S.), han-da, an-da, ho-da, oi-da Gonga, fu-du, hu-du, fo-du, o-du Hausa; fu-lu Kalshi; e-fa-r, e-fa-tra, e-fa-d, e-fa-tu, e-fu-tsi &c. Malagasy (e-fa in 40). The Malagasy e-fa-r, with the allied African terms preserve the original full form of the Semitic ar and show that it was originally 2 repeated (2 dual). The same term is common in Africa as 2, bar, war, &c., contracting in Kuafi and Tummali to ar. The Semitic 4 (a) is also, in all probability, a dual of this form of 2, with the archaic labial postfix,—ar-ba from war-ba. It occurs in 7 (3, 2) and 8 (4 dual). See the remarks on 2 above, and also Semitic Numerals, 2, 4, 7. The contracted prefixal e of Malagasy is found in some Nigerian terms. It is Semito-Libyan (a, e, i, &c.) and occurs in the Egyptian and Saumali terms under the form a.

B. (a.) za-cha, an-za-cha Shangalla, ach-ech Gonga, si-za, se-dza, sa-dja Agau, ma-che-che Mukua, mu-tye-tye Mudjara, se-se-s Mazambiki, si-ja Kongo. These terms are similar to the double unit of 1, 3 and 5. They have no apparent connection with any of the Semito-African terms for 2, and may have been formed from 3 like the Kaffa 4 se-ke-che—se-koe (3, 1). Similar terms recur in 9 (5, 4), and in the Semitic 9, which not only resembles these African terms for 4 and 9, but the Semitic 6 and 3. All these affinities would be explained by the Semitic 3 being formed from 1, that is having originally been 2, 1. In both its varieties tha-la &c. and tha-th, it is represented in current terms for 1. (See the remarks on the Semitic 9).

(b.) The Berber ku-z, Shillah ko-s-t, is a similar term. The Nubian ke-n-su, ke-n-ju, ke-n-so-ga may be connected with it. Both resemble terms for 5, and possibly 4 may have been "1 from 5," but it is much more probable that they were formed in the ordinary way from terms once current as 2. The Harragi ke-t, 2, (a contraction of ko-l-et), resembles the Berber ku-z.

C. (a.) The Bishari u-ddig (dig in 9), Bornui di-gu, de-ku, Emghede-si e-ta-ki are probably 2 dual (Bornui indi 2, Fulah di-di &c.); di is one of the variations of the chief Semito-African root for 2, na, in, il, li, di &c. In Bornui the guttural is postfixal in other nouns also. See (c).

(b.) se-ile Dalla, te-ile in 9 (5, 4),—is probably from a similar term for 2. Le is the 2d element in 1 and 2 also. In 4 its immediate origin is probably the Semitic 2, she-ne Hebrew, s-en Egyptian, si-l-i Kallahi.

(c.) The Zimbrian term is the nasal Semito-African root for 2, ne, ni, na, nai &c. It prevails in the Nigerian as well as the Zimbrian provinces. Ruaheli ne, Kikamba i-na, Kinika e-ne, Takwani vi-nai, Masenaki-na, Sofo-

Ja nai, Kosh ne, Sech. *i-ni*, Nyambana *gi-ma-ne*, Zulu *i-ne, ma-ne*, Benguela *ka-na*, Angola *wa-na*, Kongo *hwa-na, ya-en, mi-na*, Sonho. *wa-na*, Embo-na *na-na*, Mpongwe nai. Compare with the Southern Makua [Takwani] and Mpongwe form the Gabon terms,—Batanga *be-nai*, Bango *be-nai*, Pan-we *be-ne*, Akonogo *mi-nu*, Cameroons *mo-ley*, Kerapay *e-nay*. Karsha *i-na, e-nang*, Rungo, Callora *ni*, Moko *i-nan*, Kaylee *bi-nan*; the Binin *ni*, Ibo *ano*, Papah *ene*, Akripon *ne*, Whidah *e*, Efik *inan*, Yoruba *mine*, Fanti, Akim *anan*, Amina *anani*, Awekwon *ana*, Grebo *hanh*, Kru *nie*, Bullom *nen-ol*, Timmani *pan-li* (*pan, pur* &c. is a pref.), Kissi *iol*, Wolof *ni-an-et*, Mandingo *nani, na*, Fulah *id, nai*. The Darfur *ong-al*, (in 40 *ong-val*) is probably connected with this Zimbo-Nigerian form.

The Yangato *nan* of *nan-giri* 8 appears to the same term.

In the Zimbian 4 the most radical and persistent element in the Semito-African 2 appears as the original term. In 2 it has the forms in, ne, na, rei, na Semitic, il, li, le, ri, re, ne, nu, ul, di &c. African. Some of the amplified forms, na-i, nani, nan, i-nan &c. involve the Semitic postfix as well as the radical element (*ih-na-ni* Arabic), or, as is more probable, they are the original dual form in full, 2, 2. These double forms are not found in the E. and S. W. Zimbian dialects. They occur in N. W. Zimbian—*be-ni-n* Melon, *e-ni-n* Ngoten, *be-ne-n* Lauwu; in the adjacent Chadda. prov. *na-n* Ham, *wi-nyi-n*, *nyi-n* Tüsi, *a-na-r* Koro, *a-nye-ra*, *nye-ra* Dsuku; and in the N. W. Nigerian *na-ra-to* Gadsaga, *pa-ne-re* Baga, *pa-n-le* Timani, *na-ni*, *na-n* Mandingian gr.

The term is probably equally ancient with 3 and 2, and referable to an era of the Semitic system when the liquid was the proper root of 2, and had not been concreted with the labial masc. or sibilant fern. definitive, used as a prefix or initial. To this period its acquisition of a dual and thence of a plural power is probably to be referred:

Foreign Affinities

If the African terms for 4 are all Semitic of different periods, and based on Semitic terms for 2, their foreign affinities can only be considered through Semitic, and as illustrating its archaic condition. The only term of interest in this respect is the Zimbian. In several N. and E. Asian systems the pure liquid definitive is found as 2 and 4, Aino *i-ni*, Korean *nai*, Ugrian *ni-la, ni-l* &c., 4. (See Semitic 2). These forms, with those in which it occurs as 2, render it probable that it was used as a numeral element in Semitic prior to the concretionary era,—a conclusion that is supported by the history of the language generally, which carries back the numerals to the period when the definitives were free, and capable of being used as units. The Zimbian 4 appears to belong to that era of the Semitic system when the liquid root had not become agglutinated with the initial definitives. At the same time it must be recollected that a contracted term existing in one dialect may obtain a wide currency through the spread of an influential race. The history of the Zimbian 4 must be considered in connection with that of the other numerals, which certainly favours an archaic, and not a recent, derivation from the Semitic system.

Obs. on the Distribution of the terms.

1. The contracted historical Semitic forms, including the Himyaritic, have made little progress.

2. The Egypto-Malagasy terms appear to preserve the full form of the Semitic, and are probably pre-Himyaritic or archaic Himyaritic, and of

the same era as the similar and most prevalent African terms for 2, now lost in Semitic.

3. The Zimbrian term appears to be equally ancient. Although the broad ar (from war, bar &c.) is the prevalent Semitic form in 4, it is probable that slender forms were also once prevalent in 4 as in 2.*

The broad Zimbrian terms with the labial prefix which prevail in the Western group, wana, wan, bi-wana, bi-wana, bama, with the Pelap *fu-bare-gen*, have the same form as the Malagasy *c-far* &c.

4. The other terms, with the exception of C.(a), which is probably of equal antiquity with the Zimbrian, appear to belong to that era of Semitic when fern. forms had begun to replace masc. From the distribution of these terms they appear to be of later introduction into Africa than the Egyptian, Galla and Malagasy form. The prevalent Semitic 4 may be considered as exceptional, because it preserves the same archaic masc. form. † The double sibilant &c. of Shangalla, Agni &c. was probably that of a Semitic dialect which had replaced it by the fern. form, although all the Semitic languages afterwards assimilated in their use of the masc. form, under the influence, it may be surmised, of that single dominant language which has produced so large and remarkable a uniformity in the Semitic numerals and pronouns, and in much of the general glossary also.

Five.

The terms for 5 are similar to forms of the unit 2 found in lower numbers, 1, 2, 3, and the most common, as well as the closest affinities are with forms that are used for 3,—as has already been noticed with reference to the Egyptian 3 and Semitic 5. In the prevalent African systems 5 is the highest number in the first series, six being 5, 1, seven 5, 2, &c. It might therefore be well expressed by one of the names for the unit, 1 hand, or 1 tale, and the term would naturally have a plural or collective form as in 2, 3, 4. Four having been expressed by 2, 2, the collective unit for 5 would probably be taken from forms used as 3. But from some of the terms it may rather be inferred that 5 was originally 3, 2 or 2, 3, as in some other formations. The Semitic *kha-m-sa*, *kha-me-shi*, Berber *su-mo-s* &c. is the form of 3 (1, 2) preserved in Egyptian, *sho-m*, *sha-m* &c., followed by the principal or sibilant numeral root, which may have represented 2, or been a remnant of 2, *she-see*, *ath-in* &c. The Gallo-Zimbrian form—which only differs from the Semitic in having the liquid in place of the labial second element—closely resembles Semitic and Zimbrian forms of 3. Comp. *sha-n*, *sa-nu*, *ta-nu*, *ta-ni*, *ta-ru*, *so-lu*, *la-n*, *lo-lu*, &c. 5, with *she-ne*, *ath-in*, *sa-ni*, *su-nu*, *zo-le*, *ra-n*, *ta-la*, *sa-la*, *tsa-la*, *tsa-ra*, *sa-ra*, *ka-ra*, *ku-ra*, *ta-ru*; *lu-lo*, *lu-ro*, *lu-l*, *lu-n* 3, (i. e. 1, 2). †

* Koelle gives *wer-be* as the Arabic of Berm. Possibly the *w* is archaic.

† From some of the forms in higher numbers given by Koelle, it appears probable that the second labial is radical also, and that the original Semitic term was *bar-bar* or *war-bar*, i. e. 2, 2.

‡ The Mandingian group preserves several of the variations,—*so-lu*, *so-li*, *sa-li*, *lo-lu*, *no-lu*, *ndo-lu*, *du-lu* in 5; *su-n*, *se-ni*, *su-ra* in 6; *su-nu*, *sa-lu*, *so-lo*, *sa-ra* in 7; *su-n*, *so-lo* &c. in 8 &c. In 5 it has distinct Semitic and Nubian forms, *sa-ra*, *sa-ra-n*, *sa-g-wa*, *sa-wa*,—*sa-g-ma* being Minyarritic through Agni. The *n*, *u* of the higher numbers is the archaic Semitic form found in Egyptian, Berber, Bishari, Galla &c.

Some specific instances of the reappearance of forms for 3 in 5 will place the fact beyond doubt. Gadsago 5 *ka-ra-ga*. (Sudanic and Bornu gut. postf.); Kandin *ka-ra-d* 3. Banyun *mo-to-ki-la*, *ki-la-k* 5,—the same variation of the Semitic 3, but preserving the slender vowel, as in *ke-ra-d* Berb.; the Banyun 3, *ha-la-l*, has the Kandin *a*, as in the Zimbrian *la-la*, *la-a*, *la-l*, *ra-ro*, *ta-ro*, *ta-ra*, *tsa-la*, Maudingian *sa-ra-a* (preserving the Semitic *s* form of the pref. in the S. E. Zimbrian *tsa-ra-ro*). S. E. Zimbrian *h-la-n* 5 (Nyamban), similar to a N. W. Zimbrian 3, Ngaten *he-la-n*, Isuwu *he-la-ro*, Calabar-Chadda *e-la-ro*. Nalu *te-du* 5, Zimbrian *te-t*, *ta-tu* &c. 3. Timbaktu *i-gu* 5, Bornu *u-gu*, *u-ru*, Hausa *u-ku*, *e-ku* 3, Pika gr. *ko*, *ku-nu* &c., Kuafi *o-ku-ni*. Mandara *i-li-ve* 5 (3, 2), Ndob (S. of Mandara, apparently in the Chadda basin, whence Mandara probably acquired its Zimbrian character) *le* 3, *be* 2. Baghermi *ni*, Hausa *bi-al*, *bi-ar*; this may be either 3, or 2, closely allied forms occurring for both numbers; the Hausa *bi-u* 2 (for *bi-ul* &c.) is in favor of its being 2, but similar forms are common for 3 and 5. Fulah *dso-wi* (5), *dso-we*, *dse* in 6 (5, 1), Mandingian *so-lu*, Boko *so-la*, Mbarike *i-tso-n* Usuku *tsa-ana*, Woloff *dsu-dom* Nuñ, gr. *gu-tsu*; these are typical of the most common forms, save that the sibilant has generally *a* and the liquid *u*,—*ta-nu*, *sa-nu* &c., Zimbrian. The *u* of *nu* &c. as well as the prefix, shows these forms to have been derived from 3, *ta-ru*, *ta-ro*, *ta-tu* &c., and not from 2, in which the liquid root has generally slender forms, *li*, *ni*, *ri* &c., and takes the labial prefix. Forms in *o* and *u* are also found in 3, *e-to*, *a-to* Isoama gr., Dahomey gr., *to-re* Baghlan, *ne-o-do-so* Kiamba, *ma-dsou* Padsade, *bi-dso* Biafada.

A (*a*) *tu*, *tu*, *ti* (in 50 *tau*, *tau*) Egyptian,—the unit in the archaic Semito-Libyan 3 form, as in the older African forms of (*b*) *su*, *tu*, and without the labial.*

The sibilant unit is found as 5 (3 for 3, 2) in the adjacent Bishari 6, 7, 8 and 9, in the forms *su*, *she*, &c. In 6 it has the form *so-ra* (1 A. *h*), the Semito-Zimbrian form of 3.

The *u*, *o*, form of the dental unit (variable to the sibilant &c.) is preserved in the 8 of Gara, *thu-m* (3, or 5†, for 5, 3), corresponding with the 3 of Egyptian *sho-m*, with the 1 of Gonga and Malagasy *i-so*, Egyptian *uot*, (= *ma-t*), Nkele, Bongo *ma-to*, Undaza *ma-ko*, Murundu *ea-ko*, Grebo gr. *do*, Boko *do*, Afulu *ka-do*, *do*, Mbarike *n-dso*, *n-dzo*, Vei *do-ndo*, Kauro *ku-dum*, Kiamba *ku-dom*, *ku-lum*.

(*b*) *kha-m-sa*, *kha-m-s* fem., *kha-m-sa-ta* masc. Ar., *kha-m-ish-shah m.*, *kha-m-esh f.* Heb., *khe-m-us* Malrah, *kh-ish* Gara, *kha-m-is-ti* Babylonian (*kha-n-sa* 50) *kha-m-sha m.*, *kha-m-esh f.* Chald., *a-m-is-t*, *au-m-is-t* Amharic, (*ka-m-sa* 50), *au-m-ish-te*, *ha-m-ish-ti* Tigre, *a-m-is-t*, *ha-mun-is-t* Harragi, *ha-m-is-ta* Gafat, *ha-m-za* African Arabic and Emghedesi, *a-m-us* Adziko, *su-m-us* Berber, *su-m-os-t*, Shillah, *tu-m-at* Timonani, *a-ma* Tumul, *ba-su-me* Dalla, [See Semitic Numerals]. In these forms, which are radically 3 (i. e. 1, 2) or 3, 2, the initial unit varies to *kh*, *k*, *h*, *s* and *t*, and its vowel to *a*, *e*, and *u*.

The *u*, *o* form—probably the archaic Hinyaritic—appears to have

* I have not seen Lepsius's paper on the Egyptian numerals, but it appears from Bunsen's reference to it in his *Egypt*, that Lepsius considered *tu* to be 2 (for 2 + 3.)

† 5 has the same form in the *tu-m*, *su-m* of Berber, Dalla &c. (see *b*).

been early and widely spread over North and Middle Africa—preceding the *a* form of Zimbrian (c). It is found in Darfur os,*—with *m* (for 2) in the Dalla, Berber, Timmani and some other archaic forms of the Semitic 5 *su-m*, *tu-m* &c.—with *n* (for 2) in the Galla *shu-n*, Shiho *ko-n*,—and in several Mid-African vocabularies. Fulah *dso-mi* (*dso-go*, *dso-ne-go* G. i. e. 5, 1), Dsuku *tsu-ana*, *a-tso-ana*, Dsurawa *to-nun*, Mbarike *i-tso-n*, Afulu *nbe-dsu-en*, *be-tu-en*, Okubono *so-no*, Mandingo gr. *so-lu*, *su-bi* &c., Woloff *dsu-dom*, *dsi-rom* in 6, 7 &c., [Kamba *ku-dom*, *ku-lum* 1], Felup *fu-to-gen*, Filham *fu-toh*, Dahomey gr. *a-to*, Nuff gr. *a-tu*, *gu-tsu* &c., Ibo gr. *i-so*, *n-to*, Ya-gua, Ham to, Aka-Igala, *a-ra*, *e-ra* &c. Eegha *i-lha* &c., See *b*, *c* and *d*, for other examples of the wide currency of *o* and *u* forms. To the Babylonian *su-su* of 60 Colonel Rawlinson has now enabled us to add *su-mu* 2 (identical with the 3d pron. pl.), *su-du* 6, *ru-lu* 4, *su-ma-na* 8.*

(c.) The Galla and other forms with the final liquid *n*, *ana*, *lu* &c. have so wide a range that they must be considered separately and more fully. *Shu-n*, *shu-n*, *za-n* Sammali, Galla, *ko-n* Shiho, *ko-no-yan* Dankali, *ta-no* Seaheli, *i-da-no* Ki-Kamba (*de-n* in 6), *za-no* Ki-Nika (*lu-n*, *ta-n* in 6), *ma-ta-nu* Makua, *mu-sa-en* Mndjanga, *n-hya-nu* Mukonde, *vi-ta-nu* Takwardi, *sa-nu* Masama, (*a-n* in 6), *sha-nu* Solala (*ta-n* in 6), *tha-na* Masambiki, *tha-nu* Dalagaa Bay, *n-ka-nu* Nyambama, *txa-nu* Zulu, *txa-ru*, *cha-nu* Se-huama, *hla-nu* Kosa, *ta-nu* Benguela, Angola, Kongo, Kambinda, *bi-ta-nu* Mundjola, *sa-nu* Sunka, Binda, *ma-ta-n* Camancons, *at-to-ng* Kerapay, *i-tu-ne*, *i-ti-en* Karaba, *e-ta-ni* Rungo, *so-ni* Caliba, *we-ti-n* Moko, *bi-tu-n* Kaybe, *ba-ta-n* Bongo, *ta-ng* Binin, *a-to-ng* Papah (Dahomey), *u-nu* Akripin, *mi-m* Akkin, *a-no-m* Amina, *e-no-m* Fanti, *i-a-nu* Ashanti, (probably from *mi-a-nu*, *mi*, *bi* &c. being prefixal in other minerals in this group), *m-u-n* Bulloni, *m-u* Kru, *so-lu* Vei (the 1st element with *a* as in Papah, Caliba, Karaba, Kerapay, Shiho and Dankali), *su-li* Susu, (the 2d element with *i* as in some of the lower Nigerian and Gabon terms), *du-li* Sokko, *do-lu*, *lo-lu* Mendi, *lu-lu* Mandingo, *na-tu* Pessa, *la-lu* Kosa, *lo-lu* Jullunkan, *ngue-nu* Kissi, *ma-lu*, *a-ro* Yoruba.

The Hausa *bi-ar*, *bi-ar*, Kallala *bi-et*, Kallabi *vy-die*, Mallowa *be-a* strongly resemble some of the Galan forms of the Zimbrian *bi-ta-nu*, *vi-ta-nu*. Kwallaifa has *ba-t-mi*. In the Galla-Zimbrian term the root varies from the sibilant and dental to the guttural, and in Mandingo the common interchange of the sibilant and liquid takes place, *sota*, *lola*. Other liquid varieties are given by Koelle, *e-lon* Penin, *li-ne* Mandara, *e-lon* Faten, *be-ron* Mlofon, [= Hausa *b-ar*, *i-al*], *kim* Nyambara, *be-di* Pika, *ja-di* Bode, *ma-ru*, *a-ru*, *e-ru*, *e-i* Yoruba gr., *e-lu* Igala, *ba-m* Gwesa. Koelle also gives bestane Nki, *mi-tun* Undaza, *be-ta* Murundo, *be-tai*, *we-tai*, Konguan.

The Galla-Zimbrian term is evidently cognate with the Semito-Libyan sibilant 5, which the *m* 2 replaced by the *n* 2. Comp. Berber *su-m-as*, Kandin *su-m-as*, Shillah *su-m-as-i*, Timmani *tu-m-at*, *to-m-at*, *tsa-m-at*, Dalla *ba-su-mu*, Landama *ge-tsa-m-at*, Limba *ka-se-f* &c. The Galla *shu-n*, the Shiho and Danakil *ko-n*, *ko-no*, with some of the Zimbrian and west-

* But this may be the remnant of a term like *sum-as* (see c).

† On the prevalence of *a*, *e*, forms in the earlier Semitic, and their transference to Africa by the Babylonio-Mindagitic colonists, see p. 4.

em terms, *tsu-n*, *dsu-en*, *tu-en* &c. have the same archaic vowel. The Babylonian *kha-ma* 60 is an Asiatic example of an ancient change of *m* to *n*. In Galla-Zimbian terms for 10 the Semitic compound occurs in both the *n* and *m* forms, *tu-m*, *tu-n*, *du-m*, *tu-m-mu* &c. Galla *tam*; *ku-m*, *ku-n* &c. Zimbian; *ta-n*, *ta-mu*, *dsu-a*, *dsu-b* in other vocabularies. The Galla forms suggest that *tu-n*, *su-n* &c. may have been contractions of lost Semitic forms of *tu-m*, *su-m*, which took the nasal or plural postfix *n* as in 2, in place of the sibilant (generally *gn*). In the other Semitic and Egyptian terms in which the combination *kha-m* appears with the initial unit in the sibilant form, the labial has a final *n* (8 Sem. *lg.*, 3, 10 *Eg.*). Kambinda has *sa-mba-nu* 6, *sa-mba-ida* 7, Kongo *ma-sa-mba-nu* 6, *a-tsa-mbo-adi* 7, Angola *sa-ma-nu* 6, *sa-mbo-adi* 7, Benguela *pa-adi* 6, *pa-nu-adi* 7. The *mb*, *adi*, *ai*, of 7 (5, 2) is 2. But the final *nu*, *ida* of 6 is not the current 1.

It may be said that both 5 and 6 are variations of archaic forms for 1. The Zimbian *sa-ma-na*, *sa-mba-nu* contains the same liquid root *n* and the same prefix, and might appear to be only an additional prefix. The liquid occurs with both prefixes in 2, *sa-n*, *su-nu*, *s-ro* &c., *mha-n*, *mha-n*; and if it has the power of 1 here it may indicate that the second series has commenced. There are remnants, however, of similar forms of 1 and the analogy of the other African systems, with the use of the *n* form for *a* in 7, might seem to support the conclusion that both 5 and 6 were variations of a term for 1. Comp. *gi-en*, *ku-n*, *gu-n*, *dsu-n*, *in-ne*, *n-ne*, *na-to*, *ke-to-ne*, *ba-ne*, *sa-ne*, *pa-be*, *we-an*, *na-re*, *ba-ba*, *ka-ba-ke-le*, *pa-ni*, *pa-to-lu*, *fa-no-d* &c. with the liquid forms *r* 2. The Shilo variation of the Galla 5, *ko-n*, is identical with the Akurakura 1.

The prevalence of the liquid unit as the radical element in 2 and its dual and plural power have been noticed. The terms for 5 more often resemble those for 2 and especially 3 than for 1, and it may well be that in 5 the unit also had the form appropriated to 2, or 3, because in 5 the unit had necessarily a plural or collective meaning, and in its original condition indeed was probably 3, 2. The Galla-Zimbian *sha-n*, *su-n*, *sa-nu*, *tu-nu*, *ta-nu*, *ta-n*, *so-nu*, *so-lo*, *so-li*, *lo-nu*, *no-no*, *a-la-n*, *k-la-n*, are similar to the 2 of Semitic *she-ne*, *ath-in*, *su-nu*, *ta-r*, *te-r*, *s-roh*; and the cognate African terms *go-le* (Zimba.) *ma-ra-n* &c. but the same form is the common 3, (1, 2), Semitic, Zimbian &c., and a comparison of all the dialects renders it clear that 5 was 3, 2, and that the terms now current generally contain 3 only.

(d). *tu-pa* of *isi-tu-pa* 6 Zulu, and *n-to-ka* 6 Batung. has the same form of 5 with the labial for 2. In 8 and 9 it is preserved as 10 in the form *to-ba*. The form is similar to *tu-m* of (b.) and (c.), and to the Babylonian-Egyptian 3d pron. masc., *su-va*, *tu-f*.

(e). The Agau *ak-ma*, *ank-na* (*-na* postf. as in *lo-na* 1, *sha-k-na* 3) is an analogous term to (a.) It is probably a contraction of *shak-na* 3.

(f). *mu-ku-s* Shangalla, *hu-ch*, *i-chi-sha*, *hu-che-sa*, *hu-cha*, Gonga gr. *te-su*, *di-dja*, *di-dja*, *di-ke* Nubian (comp. *di-ke*, 1. Harur). These are examples of the common double form of the dual or unit and fem. postfix, used for 3 in Mahrab, Gara, Nubian, and Abyssinian languages &c. (6. B. c.). In the aspirate form *hu-cha* &c. the initial unit has the same form as in the Arabic and Hebrew 3d pron. (he, hu). In the Gonga *hu-an-pa* 6, corresponding with *su-su* 10 of Babylonian, it retains its radical value as 1 (1-5, so *ku-pa* 7, i. e. 2, 5, *hu-pa* 8, i. e. 3, 5, — 3 being the same Semitic-African sibilant unit). The term recurs in the Shabbe or Kakanda

of the Lower Niger as 1, in the compound prefix *hoos-war-* of 2, 3 and 4.

B. *ib* Bishari. This may be a form of the labial unit as in 3 *mih*, but it is probably only the archaic labial postfix as in 3 and 8, the root being elided.

C. *po-na*, *pu-na*, *Woratta*, *Wolaita* in 6 (1, 5), 7 (2, 5), 8 (3, 5), and 9 (4, 5), *fu-n* Yangaro in 6. This is the labial unit, but it may have been more immediately derived from the *she-men*, *she-mon*, form of 3 by contraction. In the Kissi *ngom-pu-n* (5, 1); it has the same form. *So ba-l*, 1, *Bullum*. It also occurs in 7 of *Ki-Kamaba mon-sa* (5, 1), and *Ki-Nika fung-ah* (5, 1), and, with a form similar to the latter, in the *Tumali fun-as-un* 9 (10, 1) and *fung-en* 10. The *Darfur wi-ng* of 10 (in 20, 30 &c.) is the same term.

D. *lima* Malagasy. This term does not appear to be a Semito-African unit. In *Asotesia* it is used both as 5 and as a term for "hand", and the latter was probably its primary meaning in Malagasy also. It is a N. E. Asian term; and in *Zimbiana* it is still current for "finger" and "toe" *lemi*, *liemi*, *liam*, *lembu* &c.

Foreign Affinities.

The various forms of the most common Semito-African term, *kha-m*, *su-m*, *tu-m*, *sa-ma*, *sa-mbo* &c. are N. E. Asian *ko-m*, *Samojede so-mb*, *so-bo*, *sa-ba*, *su-m*, and Mongolian *ta-bun*, *ta-bu*, in which the labial is an archaic qualitative postfix. Forms with final *n* also occur, *tung sun* &c. In the archaic Seytho-Chinese or E. Asian system a connection is also observable between these names for 5 and some of those for 3. The *Samojede* and Mongolian *su-m*, *sa-ba*, *ta-bun* of 5, agrees with the 3 of Chinese *sa-m*, and Caucasian *sa-mi*, *su-mi*; and the *Tungusian tung-ga*, *tong-na*, *Kamtschatkan ton-ak* &c. (in 5, 8, 9) &c. with the 3 of Chinese *sa-n*, *Yemiseian tong-ga*, *dong-em*, and Mongolian *kol-m*, *kor-ba* &c. The *Ugrian* and *Turkish* 5, *vi-s*, *vi-t*, *vii-si*, *bias*, *bi-sh*, *bi-l-ik* &c. is 3 in *Turkish wi-ss* &c., *Japanese mi-tsu*. The Caucasian *chu-ba*, *chu-thi*, *chu-t* 5, is similar to the 3 of Caucasian *chi-ba*, *su-mi*, and of *Ugrian chu-d-em*, (in 6 *chu-t*), *ku-m* &c. The sibilant unit of 5 in *Japanese*, is a like form to the *Egyptian* &c. (*a*) and the double form (*f*). The labial unit (*C*) is used as 5 in *Ugrian* and *Euskarian*; and the *Indo-European* term may possibly be the same.

The adjacent Caucasian *chu-thi*, *chu-t*, *wo-chu-si* *Georg.*, *tchu Cire.*, *chu-ba* *Awar* are analogous to Semito-African forms.

Obs. on the distribution of the terms.

5 presents a repetition of two of the roots for 3, the sibilant, guttural &c. with the labial, and with the liquid, *-s-m*: *s-n*. The form of the sibilant &c. with the labial postfix is evidently very archaic. It is preserved in other numerals also, and the cognate Caucasian, Seythic and N. E. Asian terms are proofs of its high antiquity. The Semitic final *s* (*kha-m-sa* &c.), like the final *n* of 2 (p. 16), appears to have been added in the Asiatic branch after the archaic Semitic system had been carried to Africa.

The archaic or pre-historic *u, o*, form of the Semitic unit appears to have been conveyed by a *Himyaritic* dialect to Africa, and to have been spread from the Nilotic provinces to the Atlantic, over the Northern and Middle regions. It probably preceded the later Semitic *a, i*, forms in *Galla* and *Zimbiana* also. See the remarks on the *Egyptian* 3, *ante* p. 4. Since that page was printed the full *Babylonian* series of numerals, as given by

Colonel Rawlinson in the last no. of the Journ. of the R. Asiatic Society, has corroborated the inference that the definitive in the u, o, form was the primary unit of the Semitic system both in 1 and higher compound numbers. It is found in the Babylonian su of 2, 8 and 60, tsu of 6, and ru of 4. The Babylonian 5 has a later form, and probably replaced an archaic one similar to that preserved in African vocabularies, su-mu, tu-mu &c., to the Egyptian sho-m 3, and to the Gara thu-m, Bab. su-ma 8.

The Hinyaritic and Agran-Mandingian sha-k-ma 3 is not found in names of 5 although preserved in Mandingian terms for 8 and in the Fulah 10.

The current Semitic forms for 3, tha-la, sa-la, sha-lo &c. Arab., Heb., Chald.; tha-th, shi-sh, so-s Hinyaro-Nilotic, are similar to the most prevalent African terms for 3 and 5. They have evidently spread from the upper Nilotic province over the rest of Africa, probably replacing the more ancient or northern Nilotic form with the labial postfix, in most of the vocabularies which had previously received it. Their use probably dates from the time when the liquid postfix superseded the labial in the Semitic 3. The dialect, perhaps a west Hinyaritic one, from which they spread as a centre, must have used this form both in 3 and 5. The principal African diffusion of the t-t, t-n, t-k, t-r, l-r &c. forms is distinctly referable, first to their prevalence on the upper Nile, and then to the great Zimbrian dispersion over southern Africa and Nigeria, including the Chadha province and part of Mid-Africa continuous with the Niger and Chadha basins.

The Semitic 5 in its archaic u form appears to have previously spread over northern Africa. Its presence in Dalla, (Egyptian), Berber, Shillah, Kandin, Fulah, Gad-aga (in 6) and in several of the languages of the Senegambian coast (Landouana, Timani &c.) is thus explained. It is found along the Semito-Libyan band from the Persian Gulf to the Atlantic.

Six.

In the Semito-African systems, as in most others, the terms above 5 are repetitions or compounds of those of the lower series. Six is 5, 1, or simply 1, or it is 3 (dual); seven is 2; eight 3; nine 4; and ten the second 5, or 5 dual, (2, 5; 5, 5; 2; 5).

The Semitic 6 is probably 3 dual. Nearly all the African terms are 5, 1,—the 5 or the 1 being sometimes elided. Some of the Eastern and Southern Zimbrian terms are 3 (dual); the others are 5, 1, or, by contraction, 5, or 1.

A. (*a*) s-on, s-ov, s-oo (in 60 se) Egyptian. This is the sibilant definitive and unit, with a remnant of the labial postfix it has in 3 and 8, and probably had in 5. See C.

B. si-t, si-ta, se-te fem., si-ta-ta masc. Arabic, shi-sh-shah masc., she-sh fem., Heb., shi-tta masc. she-t fem. Chaldee, tsu-du, (su-su 60) Babylonian; sha-t-id Gara, ha-t-id Mahrab, se-d-ist Amh., se-d-ist Tigre, se-d-is Berber, shi-tta, shi-dda Hausa, su-th Shillah, zu-du Kalah, [= tsu-du Bab.], z-du Bode, si-tta Engghedesi, se-tta Suaheli.

The unit occurs here in its double or fem. form, as in the Hinyaritic and several African terms for 3 and 39. It is probably therefore to be considered not as a quinary term, but as the second 3 (3 dual). The Gonga 6 shi-r-ta, shi-ri-ta appears to preserve the liquid element of most of the Semitic forms of 3 (se-le-se Tigre, sa-la-the Ar. &c.) The Darfur sita sun-dik appears to be a double term; sita is the Arabic 6; sun-dik is the Galla-Zimbrian 5 followed by the Darfur 1.

The Babylonian tsu-du, Kalah zu-du, is a link between the dento-sibi-

lant and the liquid forms of the definitive, the former being the Himyaritic (Mahrah, Gara) and the latter the common Semitic form of 3. The 3 of Galla *su-de*, has the Bab. *d* of 6 as well as the *n* of the first element. The liquid form is also found in some African names for 6, Ndob *so-lu*, *so-la*, *so-ro*. This is the 3, *sa-la*, *tha-la*, *sha-la*, *she-la*, of Sem., with the Him. *so*; of Zimbian, *ta-ro*, *ta-ru* &c.; and of Mandingian *sa-ra*. It is also similar to forms of 3 found in 5, *so-lo* Boko, *so-lu* &c. Mandingian gr., and to the Semitic 10 *a-shu-ra*, *a-su-ra* &c. The connection between 1, 3, (5), 6, 9 and 10 in the Semitic system is well illustrated by some of the Mid-African languages which also preserve the Semitic form of 10 in 3 and 6. Bornui gr. 1 *ha-ga*, *ha-ge*, *la-hu*, 3 *ya-ge*, *ya-gu*, 6 *a-ras-ge*, *a-ras-gu*; Calabar gr. 1 *e-dsi*, *dsi-dsi*, *dse-t*, 3 *e-sa*, *be-sa*, 6 *sa-ga-tsa*, *a-sa-ra-sa*, *be-sa-ra-be-sa*, *e-sa-r-e-sa*; Deuku 1 *a-tsu*, 3 *a-tsa-la*, *a-tsa-ra*. In some of these forms 6 is obviously 3 dual. *be-sa-ra*, *e-sa-ra*, *a-tsa-ra* is the form of the unit preserved in the Semitic 3 and 10, Asonesian *sa-ra* 1 &c.

C. (a) *su-goor* Bishari, 5, 1. The sibilant unit *su*, *she*, *se*, represents 5 in 6, 7, 8 and 9 [See 5, A (a)]; *goor* is a term for 1 found in *nu-ggir* 11. (See 1, A. c., g.).

dse-go, *dso-we-gōo* Fulah (go, *gōo* 1).

(b). *gor-ju*, *gor-gu* &c. Nubian; the same form of 1 as the Bishari *goor*.

(c). *ogu-su-ve*, *gu-tso-ai*, *to-ai* Nufi gr.; 5, *su*, *so*, *to*, as in the Egyptian and Bishari 6 (see 5, A. a); *ai*, *ei*, 1, for *wai*, *wei* (as in *inu-wei*, another form) a contraction of *weni*.

D. *dja-ha*, *dya*, *ja* Galla. *Dja-ha* &c. may be a variation of the double sibilant of Semitic &c. as in 3. See also 5 A. f'.

E. (a.) Feh Saumali, *lehaye* Dankali, *leh* Shih, *er-de* Dalla, *el-el* Tumali, *ille* Kuafi, *hm-le-do*, *hm-le-g-ha*, *me-le-do* Grebo gr. (5, 1). This is the liquid form of the unit as in Dalla *ille*, Agau *la-wa* [1, B. c.]. Comp. also 3, *le* Ndob, *ra* Mfut &c. *li-ve* Mandara, (see 4 and 5).

(b). *wa-l-ta*, *wo-l-ta* Agau, *fa-r-schu* Nuh., *ba-li-wa-l* Dseluna, *va-la* Panwe. The liquid is the root for 1 in Agau *le-ma*, *la-gha*, Nubian *wa-r-am* &c.; *far-shu* may be 1, 5, as *di-su* is 5. The most prevalent Nigerian 1 has the form of Dalla (*er-de* 6, *ille* 1), Tumali *el-el* 6 &c. Comp. 1 *pu-lo-le* Kanyo, *ke-le-n*, *ke-le* Mandingian, *e-li*, *e-ni* Aka-Igala, *la-hu* Bornui (Agau *la-gha*) &c., *ke-de-n* Bode &c. The Kambali *to-li*, Ham *to-ni*, Yola *e-ri*, Famin *e-len-daro* are cognate terms (Bornui *ti-lo* 1, Shangalla *me-te-l* 1 &c.).

(c). *e-ni-na*, *e-ne*, *e-n*, *a-i-ne*, *u-ne* &c. Malagasy, *ene*, *ini*, *uno*, *ono*, *ana-m*, *inu-m* &c. &c. in Asonesia [See 1, A. f.]. Aka-Igala *e-ni* &c. 1. It may be from the liquid 3 (5).

F. (a.) *wo-ra*, *uo-ra* Mandingo, *wo-ro* Jullunkon, *Sokko*, *ro-wa* Mpongwe. *Woro* appears to have originally represented 5 in this numeral, 5, 1, as it is found joined with 2 in 7 (Mandingian). (See 5 C.)

(b). *ma-i-fa* Yoruba, *e-va* Yebu, *a-wa* Fanti [1, A.]

Koelle gives *e-fa*, *me-fa*, as the form in all the dialects of this group—Aka-Igala. It is not the current 1 of the group, which is *me-ne*, *e-ni*, *e-li*, *i-ne* in 1, and *me-ko*, *wo-ko* &c. in 11 (*Id-sa* has *o-ko* 1). It is the double labial prefix as in some of the Zimbian forms of 1, and indicates the archaic currency of forms like *me-fa-ni*. Comp. *ba-ne* Galsaga, *ke-ho-ne* Nki, *fa-ne-d* Felup &c. The labial prefix is found as 1, 2 in several dialects. The double labial occurs in Zimbian terms for 2. The Calabar and

adjacent inland dialects have *be-ba*, *e-ba*, *e-we*, and some of the W. Zimb-
bian *bi-ba* &c. 2 (for *be-ba-li* &c.), and this form of the prefix is, by its
vowels, the same as the *me-fi* of the adjacent Aka-Igala 6.

G. *husu-puna*, *hosu-puna* Gonga (Woratto, Wolaitso) 1, 5. (1, A. 2.).
Although *husu*, *hu-su* is 3 (*hu-su*), it here clearly retains its primary unit
power, for *puna*, *puna* represents 5 in higher numbers also, 7 (2, 5), 8 (3,
5), 9 (4, 5). In 5 the same form is used as 3 (*husu-puna* 3, 5).

H. *den-tutu* Ki-Kamba (i-tutu 3), *hau-dahu*, *tan-dahu* Ki-Nika (ha-
hu 3), *an-hata* Massai, *tan-hata* Somali, *ya-taru* Szechuana, *han-tanta* Gue-
resa. These terms are 3, 3, as in Semitic.

I. *sa-ma-nu* Angola, Souho, Bonda, [See 5, A. c.], *pa-udu* Benguera
(*sa* elided), *hu-su-mba-nu* Kongo, *hi-tu-mu* Mandjola, *sa-mba-nu* Bam-
binda, *ye-vala* Panwe (vala for vata 1).

Kodje gives several additional examples, and all in the W. Zimb-
bian group, to which the term appears to be confined.—*hi-sa-ma-nu*, *hi-sa-ma-n*,
ge-sa-ma-n, *mi-sa-mu-nu*, *ba-se-mi-n*, *bi-se-mi-ni*, *p-sa-mba-nu*. These
variations are the same as in the Semito-Libyan *si*, *hi-sa-ma-n*, *ten-ma-ni* &c.
The Amharic and Gonga form, *se-mi-n*, is identical with the Matsya *ba-
se-mi-n*, Ntere *hi-se-mi-ni*. Both are radically 3, the Zimb-
bian dual based on the form of 3 preserved in Egyptian *cho-me-n-t* &c. Gadsaga has also *tu-mu*.
At the same time the *sa*, *sa* is the unit found in 5 and the second element, *ma-n*,
ma-nu, *mba-nu* is similar to the Semito-Zimb-
bian *va-b*, *wah*, *ba-me*, *mbo*,
&c. 2.

K. (a). *ma-tanu* na ui *mo-dya* Makua, *m-zauy* mo medi Mudjana,
vi-tanu no mo-si Makonde, *thana* mo-asa Masambiki, *ahyauu* na moji
Takwani, *akana-yuma* Nyambani, &c. &c. (3 and 1).

(b). *i-ti-aka* Karaba (5, 1), *i-i* Ilo, 1 dropped, addix *kerapay*, *o-
si-a* Fanti, *in-si-a* Ashanti, *e-soli* Amina, *e-schen* Akripon, *m-tediang*
Akkin, *at-ngo* Papah of Dahomey (*at*, is from among 3, Zimb-
ian,—*ngo* is the guttural 1 of Yoruba &c.), *ta-hu* Binin (*tan* 5, *ho* 1).

(c). *ma-i-eda* Kru (*ma* 5, *du* 1), *meio-lad* Bulloo (5, 1), *ngon-pun*
Kissi (5, 1), *diu-rom-ben* Woloff (5, 1).

(d). *ue-irah* Kissi (*irah* 1, *ue-tah*, *we-tah* Mendi, *si-tah* Pessa, *dee-we-
go*, *iowi-ego*, *ie-ga* Fulah 5, 1).

The Isuwa or Moko group, to the N. of the Kongo-Angola, has the
eastern Zimb-ian form 5, 1, or a dual form, generally much contracted. *hi-ta-
na-i* wote Basekè (comp. the contracted S. E. Zimb-ian *ma-i-modsi* for
ta-na ui modsi). The other forms may have 3, or a remnant of it, *tu-to-
wa*, *pi-nto*, *nto*, *tu*, *nto-b*, *ntu-ru* (Comp. Mand. *ndo-lu* 5, i. e. 3, Zimb. *ta-
ru* 3). But it is more probable that *nu-to-ma*, *n-to-b*, is the dental form
of the Semito-Libyan 1 (Comp. the Shangalla *ma-ta-ma*, *mi-ta-l* 1).

The other western and middle groups have generally the form 5, 1, e. g.
owa-ra-ga Akurakura, *ton-ma-mo* Dharawa, *e-len-dam* Pahi, *tu-m-tok*
Moranda *hi-ta-ndat* Konguan, *solo-do* Boko, *wof-ante* Lunda, *hlan-ra-
dik* Banyun, *basi-medi* Pika, *hinen* Eghara, *han-tanta* Guresa, *hau-
ledo* Grebo, *sun-dondo* Vei, *men-bul* Mampa.

L. *isi-tupa* Zulu; *tupa* here represents 5 apparently (5 A. d.); *isi* is the
substantival prefix. *n-toba* Batanga is the same term.

M. *wa-ta* Shangalla, 1. (*me-ta-ma* 1, *mi-ta-l*, Galla *ma-ta*, Himyaritic
ta-at, *ta-t*, Gonga *i-ta* &c., *ta-d*, *g-ta-d* Bokama (*ta-da* 1.)

N. *bali* wal Dselana (2, 3 i. e. 2d 3, *bali* 2, *ba-ta* 3).

Obs. on the Distribution of the terms.

The Semitic 6 is exceptional in its formation as 3, 3. It is Irano-Scythic and not African.

Of the three Semito-Libyan terms for 3,—s-m; s-l; and s-o, s-t, t-t &c.; the first is obsolete in the Semitic 3, but is preserved in the Egyptian 3, the Semitic 5, and the Semitic and Egyptian 8. The Egyptian 6 may be a remnant of it, and from the close resemblance of the Kongo-Angola forms for 6 to the Semito-Nilotic for 8, it appears certain that the former is the archaic Semito-Libyan s-m form of 3. The Gaddaga tunu appears to be a distinct remnant. From the position of this dialect on the Senegal, its proximity to the North-African linguistic province, the North-African affinities of its other numerals, and the Semito-Berber form of tunu, it is evidently of the same era as the Egyptian 3, sho-m, and Berber-Timmani 5 su-mu, tu-m.

The second form s-l, s-r &c. is the current Semitic 5, and one of the Zimbrian forms. As 3 it is found in Gonga and a few of the Chadda-Nigerian vocabularies.

The third form is the Himyaric-Nilotic 3, common also in Zimbrian. It is the current Semitic 6. In Africa it is not common. Some of the Northern forms are Arabic and evidently modern. But the Kalahi, Shillah and Bode mark the ancient presence of the Babylozo-Himyaritic form of Semitic in N. Africa. Some of the E. Zimbrian terms are also formed in the Semitic mode.

With hardly any other exceptions the African terms are quinary. Quinary terms are found in most of the proper Nilotic languages, and similar forms are, as usual, traceable in the West Nilotic or Nubian vocabularies. The Nigerian 1 in most of the groups is the Nilotic liquid; and the 6 of the Grebo group as of Dalla has the Dalia-Nigerian form of 1; Bornu has the Agau form in 6 as in 1; and the Bullum gr. has the Nubian. The Fulah guttural 1 of 1 and 6—preserved in 11 of the Aku-Igala group *ma-ko*, *wa-ko*, *mo-ka* (Idesa has it in 1 also *a-ka*), 1 of Ashanti *a-ko*, and in some of the Calabar-Gaboon dialects *pa-ka*, *mo-ko*, *yo-ko* &c.—is the Semitic *a-kha* [= *wa-kha*] in one of its archaic African forms. The E. Zimbrian quinary terms are formed from the current 5 and 1, and do not appear to have spread. The W. Zimbrian 5, 1, and 2 dual, are also confined to that group.

Seven.

The terms are quinary (5, 2, or simply 5 or 2).

The Semito-Egyptian 7 is the unit in the 3 and 6 form with the labial postfix, and at p. 7. I considered it to be 6 for 6, 1,—there being no traces of the Zimbrian subtractive meaning in Semitic to admit of its being explained as 3 (from 10). Mr. Koelle's Zimbrian vocabularies, and the identification they have enabled me to make of the names for 5 and 3, show that the Semitic 7 is not an exceptional trinal term, but quinary like the African ones. It is a contraction of 5, 2; and as 5 was itself 3, 2, and is represented in 7 by its first element, 3, the term is identical with forms of 5. Further, 3 was radically 1, 2, so that in the full original form the root for 2 must have occurred thrice [(1 × 2) + 2] × 2. The first element representing 5 is the ordinary 1 in its sibilant form *sa*, the second element, the labial *ba* representing 2, is from the labio-nasal 2 common in Africa and preserved in the Semitic 4.

A. sa-ba, sa-ba, *fem.*, sa-ba-ta *masc.* Arabic, shi-ba *masc.*, she-ba *fem.* Chaldeæ, ha-ba-*ad* Mahrah, shu-a' Gara, shu-ba-te Tigre, su-bha-t, a-ba-t Amharic, su-bha Darfur, sa-ba-ta, shu-ba-ta Gonga, sa-bu Sushili, se-t, sa-d Berber, sha-sh-f, se-fe-ch Egyptian, [zo-s-pi Euskarian].

The Zimbabwian forms render it certain that the Semitic are 5, 2,

Moko gr. (Gaboon-Cameroun) sa-mba, sa-mbe, sia-mpa, (1. e. sa, se, sia from ta-ni, see &c. 5; mba, mbe from mba, mbe, la 2); Mfu ta-be (ta from ta-n 5 as in ta-fing 6 i. e. 5, 1, ta-ra 8 i. e. 5, 3: be 2); Ndob sa-mbe (sa-n 5, ndbe, be 2); Bute to-bam; Yagwa to-mva, (uto 5, mva 2); Dahomey gr. to-we (a-to 5, owe, eve 2); Kongo-Angola gr. sa-mbeol, sa-mbeol, sa-mbat, sa-mbeol, ta-mbeolia, sa-mbeolia, ta-m, ndza-mi, sa-mbids biele, ta-mbeolia to-nu, sa-mu, ta-n &c. 5: biwale, wale, hual, biela, ta-wids, bol, mind &c. 2. These forms are composed of the first or more radical element of 5, and of 2 in its full form.

A still more prevalent Galla-Zimbian form preserves 5 uncontracted, *-ma-tann na ui medi* (5 and 2) Makua, *m-zama-zi-viri* Mudjara, *vi-tann na viri* Makonde, *ahyenn na i-vidi* Takwari, *daam pidi* Mazambiki, *a-kam-ti-were* Nyambina, *kam-bini* Zulu, *tan-ma-pidi* Matatan, *tann na beli* Kiriman. Mr. Koelle gives for Nyanban *k-lun ui zimbe* (*ti-nibe-re* 2). In the Moko gr. Basche has *bi-tune-ba*. The form is also common in the adjacent inland or Chadda-Nigerian tongues, *-ton-sa-bari*, *n-sam-fa*, *tin-delo*, *e-dam-fo*, *k-tam-iwa*, *tandu-re-mot*, *ton-ifu*, *a-tam-afu*, &c. Nufi in the same prov. has *gu-to-aba*, *tau-aba*, *ato-aba*, Olukama *somo-oma*, Ham tor-fo [*to-ro-ba* (Galla)]: Mandingian *so-lo-fere*, suba-fira, Ashanti *solo-pla*.

The Nilotic languages preserve similar forms.

sora-ma-b, Bihari, 3, 2; the Sembo-Zimbrian se-ra 3 for 5, as in 6, 8, 9; ma-b 2; from mal-uh Comp Mandingian sora-pere.

to-r-ba, to-r-b Galla, t'du-bah Dalla, ko-lo-du Nubian, tu-l-ur
Bornu; to-r, ko-lo is the Semito-Zimbrian 3 (1, 2); ba and du 2.

mel-nen, Dankuli, mel-hen Shibo, bar-de Dulla; the 1st element is *mel*, fell-*ad* Nubian, mar-*lee* Tumul; the 2d is merely the nasal and dental post-
fix.

The Zimbian *sa*, *ta*, of *sa-mba*, *ta-m*, *ta-be* &c. is the *sa*, *ta* of *ta-n*, *sa-n* &c. 5. But the Semitic *sa-*, *ha-*, *su-*, *sha-*, *she-*, *se-* differs in form though not in root, from the first element in the current Semitic 5, *kha-*, *she-*. But the African forms in 5 *ha-*, *su-*, *ta-*, preserve examples of the forms used in 7.

11. (a.) li-nye-ta, la-ngi-ta Sbangalla, la-nga-ta, la-m-ta Agau.
The Agau 2.

The Mid-Nigerian lo-ba is a contraction of the Boko solo-p-la 5, 2, so-lo being a Chadda-Nigerian and Mandingian form of the Semito-Zimbrian 3 and Zimbrian 5. Mandingian has solo-fere &c.

(b). la-poma, la-pana, na-fan (2, 5) Gonga; the Gonga, Agau and Galla la of 2 (5 G.).

C. mon-sa Ki-Kamba, fung-ahe Ki-Nika. The labial 5 as in 5 [5. G.] with the sibilant 2.

Bulom gr. *maen-tan*, Mandinge *woro-fela*, *woru-nlo*, *wo-fela*, Grebo gr. *mu-leso*, *hni-leso* &c., Mpongwe *ora-genu*.

The sibilant ζ (3) with the labial prefix occurs in some of the Nigerian vocabularies, *ba-dsi-bolu* (o. 2) Karkare (ba-ulo Pika), *me-dse, c-dse* Aka-Igala (5), *pa-dsi-na pulo Bola* gr.

na-bi-shana Kufi, 2, 3; shana is the Galla-Zimbian 5, and *na-bi* a contracted form of the Zimbian 2.

D. bak-wai, bak-si, bak-wa, bak-ai, wok-ai Hausa (5, 2). Kwaklifa has bak-wi 5, (3, 2) and Hausa bu-ku, u-ku, ku-an &c. 3, (Boroni o-ga, o-ro).

E. bi-tu Malagasy; a form of 2 similar to several occurring in African languages for 2 and 4 (2 dual), and therefore cognate with the preceding terms in which the labial 2 is used for 7. The 4 of Malagasy *a-fa-t*, of Egyptian *f-ra*, and the allied African terms, are similar forms. It may however be 5 in a Zimbian form, bi-tan, fu-tah, (3 bi-tan, ha-ta, be-sa, fa-tan &c.)

F. *g-fad gi foda* (6 and 1).

Obs. on the distribution of the terms.

The full forms current in most of the Zimbian vocabularies cannot have been derived from the contracted Semitic ones. They represent the archaic Semitic forms, and preserve both the Semito-African forms of 3, *s-m* &c. and *s-n* &c. They former keeps its place in the common Semitic 5 as well as in 8, and belongs to the era of the Egyptian 3. The latter belongs to the era of the current Semito-Zimbian 3 and Zimbian 5, and appears to have spread from the upper Nile (Bishari, Galla.)

Eight.

Most of the terms are quinary (5, 3). Some of the Zimbian are quinary, some are 4 (dual); and a few are 2, 10.

A. *tha-man*, *sha-man fem.*, *thu-ma-ni-ta masc.* Arabic, *she-mon-ah* masc. *she-mon-eh fem.* Hebrew, *te-man-ja masc.*, *ta-mi-e fem.* Chaldee, *tha-man-id* Malrah, *thu-m* Gura, *she-man-te* Tigre, *se-min-t* Amharic, *se-min-ta*, *shi-min-ta* Gonga, *the-man-in* Darfur, *sh-men*, *sh mun*, *sh-man-e*, Egyptian, *te-m* Berber, *te-m-p*, Siddhah, *du-la* Tumbi [du = 20, tu], *mai-sa-wa*, *do-sa-wa*, *mai-sag-wa* Mandingian gr.; 3 or 5, 3.

B. *sumhai* Bishari, 5, 3 (su for 5, mih 3). Probably the term is the same as A; mih 3 may be a corruption of a term like *su-mihai*, a variation of the Egyptian.

C. *sa-di-et*, *za-di-et*, *se-de-id* Galla, Saumali, (3 of Galla &c., Semitic), *shi-dan-la* Kollahi, *si-oda* Kwaklifa, *se-re* Masam, *Safala* [Galla *se-gi*, *se-de*], *se-tti* Soko, *se-ri* Mandingo.

Zimbian and Mandingian forms preserve the proposed 5. *i-lan ni se-ra-ro* Nyumban, *tu-ma-taro* Matatan, *bi-tane-bi-tads* Basseke, *dsowe-tuti* Fulah, *son-tutat* Linba, *sun-sag-ba*, *solo-ma-sare* &c. Mandingo gr.

D. *ba-ha-ra* Danakil, *ba-h-r* Shiha. This is 4 dual, 4 itself being 2 dual. It is the common labial term for 2 found in the Galla family in 2 and 4. The Malagasy *valu* is the same term. The final *a* is that of the Bishari *mahu-b*. [See 2, B. c.]

E. *su-gua-ta* Shangalla, *su-gho ta*, *sa-gha-ta*, *so-ho-ta*, *so-ta* Agnu. The Agnu 3.

See C. The Zimbian form of *sa-ra* is also found without the proposed 5 in Gadsaga, *se-gu*.

F. *quon-qu-ah*, Galla, 5, 3; *quon*, which recurs in 8 and 9, is the form of 5 in Shiha &c. Lou. In *quash* for *otto* 3 the sibilant becomes guttural, as in the Gonga 3 *ke-dja*, *ke-s* &c.

G. *hee-pone*, *hee-pone* Gonga (5, 5). The same form of 3 occurs as the unit in 6 husu. 3 is *heza* &c.

H. *nan-giri* Yangaro; *giri* probably corresponds with *gin* of *iz-gin* 8 which is the *gal, gala*, of the Galla family; *nan* appears to be the Chadda-Nigerian and Zimbrian 8 and 4.

K. *e-du, i-du*, Nubian. The root *e, i*, is probably a contraction of *is, 3*, Darfur. 9 is *u-e-du*.

L. *wu-sku* Bornu (*wu-ku* 3 Hausa, *ya-sga* 3 Born.).

N. *ta-ko-s, to-ko-s, to-ku-s, to-gu-s* Hausa; *ta-ko* 3 for 5; *as, 3*, as in *a-to-usa* Nufi.

O. (a). *ma-tanu na ni ma-raru* Makua, *m-zana-zi-tatu* Mandjama, *vi-tanu na vi-raro* Makonde, *ahyamu na i-tatu* Takwani, *n-ka-na-ti-maro* Nyombana (5 and 3).

(b.) The following are contracted Gallo-Zimbrian quinary terms, *ye-ve-tayh* Panwe, *is-iei* Kundi, *e-tye* Fanti, *iti-ita*, *ete-atah* Karaba, *itte-iafa* Moko, *as-atu* Ibo, *attja-tong* Papah, *am* Kerrapay, *mi-eta* Gnu, *auo-tui* Ashanti, *de-sas* Timamani, *dai-rom ni-at* Woloff, *ngom-mag* Kissi, *me-ni-ra* Bullom, *ta-ra* Binin, *sali-ma-saka*, *sagi* &c. Mandingo group, *no-a-gui*, *anguee*, *uguee* Amius &c., *aghe-tu-tar* Nufi, *e-yo* Yebu, *ma-jo* Yoruba.

P. *na-ne* Suaheli, *Ki-Nika*, *nia-nia* *Ki-Kamla*, *ng-na-ni* Zulu, *kie-na-na* Bengwera, *a-na-na* Kongo, *na-na* Kambinda, *na-ne* Souho, *na-nai* Mpongwe, (4 dual; see 4 E).

Koelle gives several additional examples of this form, *e-ne-ne* Alege, *ne-ni* Ndob, *na-na* Basunde &c, *e-re-ri* Egbele &c. &c.

Q. *toba meni mbina* Zulu (10 less 2). This is a second Zulu form in which *toba* represents 10 as in 9, *toba no* monyi, 10 less 1. *Bina* is properly 4 (Takwani, Mandjola &c.), but it is here evidently a corruption of *ma-bini* 2. R. The Sechuana *hera mmoana me-beri* is formed in the same way, *hera* being the term for 10 as in 9.

S. (a). *mbexo, bozo, po-blango* Kosah, *mpuo* Mundjola, *poamo* Mut-saya, *wom* Ngoren, *fomo, fama, fomi, fan, fom, fan, lo-mbe* &c. Moko gr. 10 (a contraction of 2 from 10).

(b.) *owa-mbi* Batanga (10, 2). See 10 E.

Kongo-Angola *nake, nak, bi-nak, ð-naké*. This appears to be a contraction of 2, 10. Bangun has *ha-nak* 2, *kila-ga-nak* 7, *ha-lak* 10.

T. *danda-fudu* Ngodsin (fudu 4), *fi-fudu* Karekare, *pordo* Pika (4).

U. *dogar-so* Bagherni; so 4 (dogar-mi is 9, i. e. 5, 4).

Obs. on the distribution of the terms.

Considerable variety is manifest in the modes of forming 8. The most common is the quinary. The Semitic term preserves the glide-labial 3 of Egyptian. The Nilo-Nigerian band has both this form and the *s-r, a-d*, or current Semito-Zimbrian, 3. The Mandingian forms are of Nubian and not of Zimbrian derivation. The cognate Zimbrian 3 (of Nubian origin) is also found in some of the Zimbrian terms for 8.

Dual forms are found in East Nilotic vocabularies, in Mid-African and in West Zimbrian. The last are referable, not to the current 4, but to the double form found in some Chadda-Nigerian and in the Mandingo vocabularies, and preserved also in the Yangaro *nan-giri*. It is the Semito-Nigerian nasal form of 2.

The forms 10 less 2, and 10, are only found in a few Zimbrian dialects: They are too rare to indicate any specific affinity with Asiatic languages which possess such forms. But they render it probable that the archaic

Semito-Libyan system, like the so-called Scythic, used different modes of expressing the numbers above 5, before the terms for them became contracted and contracted. Thus six was probably 5, 1 and 3, 3;—seven 5, 2; 3 from 10; 0, 1;—eight 5, 3; 4; 1; 3, 2; 2 from 10. In some of the vocabularies two forms are still current, e. g. Tiwi has for 6 *witan* *harmon* 5, 1, and *a-tara-tar* 3, 3.

Nine.

Most of the terms are quinary (5, 4). Some are 10, 1, or simply 1, i. e. 1 short of 10.

A. *ti-s'*, *ti-sa' fem.* *ti sa-tu masc.* Arabic, *ti-sh-ah masc.*, *te-sha fem.* Itho., *ti-sha' masc.*, *te-sha' fem.* Chadic, *sa-id* Malindi, Gura, *ze-iti* Anharie, *ze-te-in* Harangi, *za-te-na* Gofat, *ti-sha-te* Tigree, *de-la*, *yi-dza* Gonga, *ti-si* Darfur, *ti-sa* Kerdia, *pa-si-t*, *pa-si-s* Egyptian, *pa-si* in 90.

sa-sa Shangai, *se-s-ta*, *se-sa*, *tsai-cla*, *si-cla* Agau (se-dza, *si-za* &c. 4). All the forms of A appear to be 3 dual, 4, or 4, 5. The Egyptian term, as Lepsius has indicated, is 4, 5, *pa-si* 4, s 5 (90 *pa-si-ta*). The upper Nilotic *se-s*, *so-sa*, are found in 4 and the form is the Harangic 9.

she-dig Bishari 5, 4 (addig 4).

sa-gg-al, *su-gg-al* Shilo, Saumali, Galla, *se-gra-la* Danakil, *sa-l* Kuuli, *ta-ra* Hausa, *iz-z-i-n* Yangoro, *is-ko-du* Nubian; *se*, *su*, *se*, *iz*, the common Semito-African contracted form of 5; *ga-l*, *ga-la*, *gi-n*, *ko-du* is not a current E. Nilotic 4, but it is the common Semito-African root of 2, 4, with the guttural prefix as in the Abyssinian form of Semitic *ki-le-te* &c., in the Zimbabwian *ko-le*, *kua-ra* &c. In some of the remote Nigerian languages it is retained both in 4, 8 and 9; 4 *ke-la* *he-d* Piliam, *he-sa-ke* Bala, *se-sa-ke* Sereres, *ke-la-ke* Ranyon; 8 *ba ki-rei* Bala, *ba-gi-rei* Sereres, *ba-ka-ri* Pepel; 9 *kanyen-ga-lo* (5, 4) Bala, Sereres.

quon-telle Dalla (5, 4, *selle* 4. See 8 F.).

hodu-poma, *hodu-poma* Gonga (4, 5).

u-e-du Nubian; uncertain; *e-du* is 8.

fun-asau Panali; 5, 4, as in *ba*; or 10, 1.

The E. Zimbabwian, like the Semitic and Arabic, terms are 5, 4, and most of the Mid-African are also quinary. *ken-da* Sonhei, *ki-ika*, *i-ken-da* *Ki-Kamua*, *toba no monyi* Zulu, *k-lan ni mome* Nyambaa, *mo-tama na ni ma-sheshe* Mukua, *m-zam*, *tyerye* Mndjao, *ri-tam na ni-m-nai* Mukonde, *ahyoma na i-iyetye* T'kwani, *aga-t-war-ne* Nuti, *e-mu-na* Fanti, *ia-lie* Bi'in (nin 4), *at-cene* Papah (enne 4), *me-in-nhol* Boloma (ne-nol 4), *de-an-li* Timuani (pan-li 4), *lin-rom* ariet Woloff, *sol-ma-nani* Kissi, *dse-mai*, *dso-we-nai* Fulah, *ta-m* Hausa, *sol-ma-nani*, *su-ma-i*, *mai-nen*, *ko-sou-to* Mandingo gr., *Batum*, *mema-hiel*, *ku-alsidsi* Kambali, *i-si-ri* So'o, *chi-ri* Binin, *i-te-rem* Isonma.

si-si Mungwey; *si* for 5 as in many African languages (5, 10 &c.), *vi* the Zimbabwian contracted 4 and 2 (as in *be*, 2, *ndeb*, *Alfu*).

The most common West Zimbabwian term is 1 (for 1 short of 10), *di-ven*, *bi-vo*, *gi-vo*, *i-v*, *i-voa*, *e-v-u*, *von*, *hua*, *vua*, *a-ho*, *a-log*, *si-po*, *i-hi*, *vo*, *de-han* &c. Full forms are found in Sechuani, *hena mono-ma monga-hela* (1 less 1), *Mpongwe*, *im-goni*, (*i-goni* 10), and *Orungu seni-homi*. Bequaen has *hi-ku* (ku is 10, the term for 1 dropped), *Okau* *oro-woa* (10, 1), *Akurakura* *osa-we* (2, 10), *Lam mben-kob* (1, 10) &c.

The Buduma *heli-gar*, Bormi *h-gar* appears to be 4, 5 (Buduma *herai* 4). A similar collocation and the same root for 5 occur in the Ekanitula *ele-gule*, Udom *ale-gule* 8, i. e. 3, 5, *e-ne*, *be-le* 3.

Ten

The archaic full form of the Semito-African 10 was 2, 5 (i. e. 2d 5.—5, 2, being 7. A few examples are still extant, e. g. *mar-kum* Shilluk, *h-m-hul* Fika, *di-sin-yane* Fojal, *bela-lue*, *ba-lue* Gusho gr.; but the common forms are contractions, 5, or 2.

A. (a.) *a-sha-r fem.*, *o-sha-ra-tu masc.* Arabic, *a-sa-ra-h masc.*, *e-se-r fem.* Hebrew, *es-ra-t* Babylonian, *a-s-r masc.*, *a-sa-r fem.* Chaldee, *a-ish-ri-d* Mahrah, *ish-ri-d* Gara, *as-ur-te* Tigre, *as-ra*, *as-ir* Amharic, *a-shi-ra*, *a-si-r* Gonga, *ha-la-k* Banyun. This is the Semitic 3, but as 10 cannot be from 3, and as the common African 10 is 5 (dual), and 5 is 3 (for 3, 2), it results that in the archaic Semitic system, both forms of 3, *s-m* and *s-n*, *s-l*, *s-r*, were current for 5, as in Africa. For the African forms of (a.) see (b and c).

(b and c) *men-t*, *nn-t*, *met-t fem.* *met-i*, *met-e* Egyptian; 5 dual. This is the other Semito-African 5 and 3 in a contracted form (*sho-men-t*, *sho-met-i* &c. 3, Egr., *su-mu-s* 5 Berber &c., *tha-man*, *sho-mou* &c. 8 Semitic, *sh-mou* E. &c.). The full form is retained by upper Nilotic languages, and as both the *m* and *n* forms occur in the same dialect, I place them together.

tu-mu-n Bishari, *tu-ba-n* Dankali, *tu-be-n* Shiho, *to-mo-n* Kuafi, *ta-ma* Worita, Wolaita, *di-ma-ga*, *di-mu* Nubian, *tu-n* (in 40, 50 &c.), *zu-n* (in 30) Shiho, *tu-n*, *du-n* Sammal (20, 30 &c.), *tu-na* (in 20), *du-m* (30), *tu-m* (40, 50), *tu-mu* (60, 70, 80, 90) Dankali, *m-mu* Gusho, *du-ob* Anna, *dso-b* Akwakura, Okam, *di-om*, *da-m*, Moko gr., *ta-mon* Serakoli, *to-ng* Mandingo, *ta-n* Vei, Jullunkon, (ta-n 5 Zimbiam) *ta-ng* Sakka, *to* Kisi, *to-ba-t* Famenon, (to-ba-t 5), *i-du* Ashanti, *kam*, *e-da* Anoma, *Alim*, *a-e-da* Akropo, *le* Bini.

The Fula *shok-pa*, *so-ga*, Kambal *lok-pa*, is the same form of 3—Himayaro-Nubian—that is found in the Mandingo gr.

It is remarkable that while the forms of the Southern Zimbiam dialects adhere to the Galla variety, both in the initial element and post-fix, the most prevalent West Zimbiam and Sudanian term returns to the Semitic form of 5 in both. The full form is preserved in *mar-kum* Tibbo (2, 5), *mulo-go*, *le-gumi* S. E. Zimbiam, *ku-mi* Saheli, *Ki-ika* Takwani, Masena, Sonka, Angola Mandjola, *kambiada*, *i-ku-mi* Ki-Kamba, *di-ku-mi* Mudjura, *ma-ku-mi* Makonde, *i-ku-me*, *ko-mi* Nyambana, *i-shu-mi* Kosah, *shu-me* Sechuana, *ku-i* Benguerra, *kwi-mi* Angola, *shu-mi* Sonho, *shu-mi* Bunda, *i-to-mi* Mpongwe, *e-ka-nue* Kongo.

In the Moko group, the initial particle has the variations *d*, *l*, *r*, *g*, *h*, *di-om*, *i-do-mi*, *i-lo-mi*, *ko-ro-m*, *a-rem*, *gum*, *i-ho-mi*. The same forms occur in Sudanian vocabularies, *mar-kum* Tibbo, *gu-ma*, *e-ma* B de, *go-ma* Hausa. They occur also in the Chadda-Niger prov., *lu-m* Darawa, *du-ob* Anna, *a-zu-be*, *a-tu-be*, *zu-be* Kora, *ko-b* Ham, *a-kash*, *u-b* Yagum, *de-m* Ma-don (in 11 &c.), *mi-tu-m* Udam. They are also found in the Senegambian prov., *Limba* *ko-f* [= *ko-b* Ham], *Baga* *to-fa-t*, *to-fa-ts*, Ashanti gr. *a-ku-ru*, *ku-li*.

The guttural forms depart not only from the Semitic 10, but from the Zimbiam 5, and approach to the Semitic guttural 5, *kha-mi*, of *khe-m-ish*,

kha-m-is &c. But the vowel of the initial is the archaic Semito-African *a* of the definitive and unit (*hu, su, tu* &c.), as in the N. African form of the Semitic 5, *su-mu* &c. The original of the *m* form, in all its varieties, is the Semito-Libyan guttural, dental or sibilant definitive and unit as applied to 5, followed by the labial or masculine postfix, and in some cases with superadded postfixes of number or gender.

(c.) *ku-db-an, ku-du-n* Galla: this appears to be *du-n* &c. of *b* (the Zimbian 5), with the guttural prefixed. The Dalla *gulla kudde* conjoins the Galla term with another.

B. (a.) *man-ka-s* Shaugalla (5 in the common Himyar-Nilotic 3 form. See 5, A. f.)

(b.) *chi-ka* Shaugalla, Agau, *tsi-ka, su-ka* Agau, *ta-cha* Gonga (ib.).

C. The root for 2 only is preserved in a large number of the vocabularies, *bure* Nubian, *fung-en* Tamasli, wing Darfur (in 20, 30 &c.), *mer-aqa* Berber, *mar-ow* Shillah, *mar-an* Kandin, [*mar-kum*, 2, 5 Tibbo]; *Landoma maran*, *Moko gr. u-wan* [*e-vuo* Ngeala must be 9, *de-bua, bo, e-vua, i-vua, bi-yo, di-vua* &c., *nsere* is given as 11, but it is used as 10 in higher numbers], *Ndoh wum, wum, owum, Mbe wum, Nso wum, Tiwi puo, Konguan biu* (2 in Hausa), *Atam* (Chadda-Niger) *womo, ewuwo, hofu, opou, opa, uba, ba, Bafada wa-popo, Padsade papo, Nulu te-bele, W. or Upper Nigerian fe-r, bi-ru, fu-ra, p, fi, Lower N. i-li, i-ri, ig-be, Nufi e-wo, u-wo, &c.*

The *Aku-Igala me-wa, e-wa* appears to be the double prefix of the Zimbian 2.

The Malagasy *vu-lu, pu-lu, Moko bu-l* is a full form of the Zimbian 2, similar to the adjacent S. E. Zimbian *mu-lu, W. Zimbian bu-ol, bo-l* &c.

In the Grebo *gr. vu, pu, pue* appears to represent 5 and not 2, *belabue* (2, 5) occurring in (Gbe. Hence the Mandingian *pu, pu-go, pfun, fu* may also stand for 5. (The other current term *tan* is 5). In the same western range the Mampa *wan* is 5 (*man*).

Sudan *bin-bad Pika, bun-bad Karekare* 2, 5, (*bad* 5, *bi* 2 is Zimb.).

The Bulanda *g-fud nigu ta-sila* is "6 and 4."

The Bidsogo *woru* ago is probably 2, 5.

The Wolof *fuk* appears to be referable not to fog 1 (Nfut &c.) but to fut &c. 2.

The Zimbian term is of upper Nilotic origin. The full form *mulo-go* Matatan, *mar-ku-m* Tibbo, has a Nilotic form of 2, and the 5 is also Himyar-Nilotic in its vowel, *tu-m* &c. When the forms *tu-mu, ku-mi*, were adopted by the Nilotic vocabularies, it is probable that a similar form was current in that of the Semitic colonists from whom it was derived. The vowel of the common Zimbian form *ku-mi* is that of the Hebrew and Babylonian 5, *kha-mi*. The Dallah *su-me* 5 and Egyptian *sho-me* 8 has both vowels. *Shiho* has them in 10 also, *tu-be-n*, and it is probable that Egyptian had both *sho* and *sha* in 10, as in 5 and 3. From the persistence of the *s-m, t-m, k-m* form in the Nilotic vocabularies, and particularly in Egyptian, for 3, 5, 8 and 10, it may be concluded that it was the principal form of the oldest Semitic colonists of the Nile.

The *m-r, m-l, b-l* &c. form of 2 is probably of the same age, as it is the common upper Nilotic and Zimbian form for 2, and appears to have been associated with the *s-m, k-m* form of 5.

The *s-u, t-n, k-n, s-l, s-r* &c. form of 3, 5, and 10 probably became the principal term of a leading Semitic nation at a later period. As 3 it

appears to have been communicated by a Semitic tribe to all the Nilotic languages save Bishari and Egyptian, and to have spread over all Africa, chiefly through the Zimbrian movements. As 5 it must at one time have been used by the leading Semitic nation, otherwise it would not now be found in 10. In 5 it became the principal Nilo-Zimbrian term. For 8 the Semitic race adhered to the *m* form, but the same African tribes that had adopted the *n*, *r* form for 5, used it in 8 also. In 10 while the Semites have preserved the *r* form, most of the Africans have adhered to the older *m* form of the Egyptian 10 and Semitic 5.

SUMMARY OF INFERENCES.

1. The Semitic and the African numeral systems are connected by a common archaic basis and by the wide diffusion of later dialectic names and forms in different eras. They are thus, in a large sense, dialects of one mother system. The dialectic modifications have been great and repeated, and the result is that each of the existing systems is very irregular.

2. In the mother system the current definitives were the numeral elements, several definitives were used, and in their numeral applications they probably retained that power of distinguishing the genus of the substantive which they possessed as definitives. The system originated in an era when the monosyllabic definitives had not become concentered, and when they might be freely compounded. The basis was binary. The names of higher numbers were obtained not only by addition but by multiplication, and, when the binary scale was assumed, by subtraction also. The mode of indicating the higher numbers appears to have long remained arbitrary—so long probably, as the different elements retained their identity with the common definitives, and were not concentered in the compounds and phonetically unitised and modified so as to become separate words. In this stage each number admitted of being expressed in several modes,—the unit, for example, varying with the class of the object, while the definitives preserved their original applications, and afterwards arbitrarily, while several generic definitives continued current,—and six being three-three, twice three, or five-one. The full double series was (I.) 1; 2; 2, 1, for 3; 2, 2, for 4; 3, 2, for 5; (II.) 5, 1, or 3, 3, for 6; 5, 2, for 7; 5, 3, or 4, 4, or 3, 10, for 8; 5, 4, or 4, 5, or 3, 3, or 1, 10, for 9; 2, 5, for 10. In the concentered systems the name for 2—itsself generally a form of 2—became the most important, as a form of it also represented 5,—the radix of the quinary names in the second series. The process of dialectic change consisted in a gradual impoverishment of the archaic abundance of roots and names, in the concretion of compounds into separate or independent words with the loss of one or more of the component roots, and in the substitution for the native dialectic names of others borrowed from the languages of influential tribes. This process destroyed the original homogeneity of the system in every dialect, and reduced each to a series of terms having only an obscure or a slight etymological consistency, save in those African dialects in which the names above 5 are still undignifiedly quinary. Some dialects still possess more than one name for the same number. Thus Borni has three words for 1,—*ti-lo* or *tu-lo*, *la-s-ge* and *pa-l* (*bu-r* in *bu-r-go-be*, *first*), and Tiwi has two for 6, *witan-karmon*, 5, 1, and *a-tar-tar* 3, 3.

3. When the numeral names became concentered and independent, they took the current definitive prefixes and postfixes of each dialect, and a new source of diversity and of phonetic change was thus introduced

These *secunda* y elements, in their turn, became subject to concretion; and the contraction of the compound has sometimes merged them in the root, and sometimes substituted them for it. New definitives have in certain dialects been superadded.

4. In their present condition the forms of the numerals vary greatly. In general they are polysyllabic compounds, in which the servile definitives are distinguishable. The archaic root compound, or compound of root and servile, is dissyllabic in many of the groups, but in some it has contracted into a monosyllable. Its form has suffered great and various modifications, rendering the correct analysis of the names difficult and at times uncertain.

5. The Semitic system is the last remnant of a dialectic group. It could not have attained its present form without changes having taken place in different dialects which influenced each other. In Africa several of such groups are still preserved, and the mutual borrowings are obvious. In addition to the changes thus induced, the Semitic system has, in different eras, affected the African, and some evidence is thus found of the existence of dialects of the former differing in certain names from the present.

Two well marked stages of the ancient Semitic system are disclosed by the African numerals. The second or later appears to have been an archaic form of the Babylonian and Hinyaritic. Its vestiges are chiefly found in Northern Africa including the Nilotic province on the one side and the Senegambian on the other. Some of its forms penetrate deeply into Mid-Africa and are even found to the south of the Delta of the Niger. The first or older stage appears to have been that of the mother formation both of the Semitic and African systems. Both the archaic Semitic and the pre-Hinyaric or pre-Babylonian African are referable to it. The influence of the later Hinyaric is chiefly marked in the Abyssinian languages. That of Arabic is slight and evidently modern.

6. The definitives entering into the Africo-Semitic numeral systems are the same that form the pronouns, prefixes and postfixes &c.

1. The sibilant and aspirate, varying to the guttural, dental and even to the liquid, fem. in the Semito-Libyan branch—with the exception of some archaic masc. *k* forms—and having, as a root, fem. applications in the Zimbrian branch, in which it is one of the principal definitives. As a 3d pron. this particle occurs in the Semito-Libyan languages in various simple forms, *su*, *shi*, *sa*, *i-sa*, *es*, *ese*, *-is*, *-s*, *hu*, *bi*, *ha-ha*, *-āh*, *-ha*, *ta*, *tā*, *i-ta*, *-ti*, *ti*, *eth*, *th*, *-at*, *-it*, *-ith*, *-ta*; in compound forms, *fem.* *su-at*, *er-su-a*, *en-tu-s*, *en-te-s*, *u-tho-s* &c., *masc.* *su-wa*, *hu-wa*, *hu-na*, *hu-mu*, *hu-m*, *he-m*, *ho-mu*, *en-tu-f*, *u-tho-f* &c., *pl.* *su-mu*, *su-na*, *su-n*, *ho-n*, *he-n*, *se-n* &c. &c. Dankali, the Galla fam., Bornu, Zimbrian and Malagasy have *i-sa*, *i-si*, *i-ta*, *i-zi*. Similar forms occur in Berber and Egyptian. The same def. is a demonstrative and dem. element, and a prefix and postfix.

2. The liquid *n*, *l*, *r*. In the Semito-Libyan system it has acquired a plural force. But it also occurs as a prefix and postfix to roots used in the singular number, and it is still current as a sing. def. and demonstrative. In those African languages that have the largest basis of archaic Semitic it is a 3d. pron.—Galla, Englishesey, Malagasy. In Egyptian it is the 3d. person assertive. In the Zimbrian system it is always singular, *li*, *lu* &c.; and in the archaic Semitic system it was prob. sing. or indef. originally.

3. The labial,—a 3rd pron. in Egyptian and Gonga; demons, and def. in all the branches, but a pref. or postf. only in Semitic (save as interrogative and relative). It has a mass. and mass. pl. force in Semito-Libyan. It has a pl. force in Zimbrian, but it is also an important sing. def.

In Zimbrian the liquid (2) and the sibilant (1) sounds interchange dialectically to a considerable extent. Thus the def. pref. *si, zi*, of Kosah become *re* and *li* in Sechuana. In the Semito-Libyan system also 1 and 2 appear to have originally passed into each other.

7. In the numeral systems the same def. occur, and with similar variations. Semitic has in 1 the forms *ha, kha, hi* and *ta* (Him.), in its African forms also *hha, a, t*; in 2 the forms *su, ta, te, ath, ita, ja, she, s*—African the, *si, ti*; *khe, ki, he, hu*; in 3 the forms *tha, sha, sa, ahe, shi, si, te*, Africa *ke, ka, k, sho, so, to*; in 5 the forms *kha, kha, kh, Africa su, tu, tin, tie, un, a*; in 6 the forms *si, shi, she, tsu, sha, ha*,—Africa also *se, su, zu, z*, initial element,—*ta, te, sh, t, du*, Africa also *da*, final el.; in 7 the forms *su, shi, she, ha, shu*, Afr. also *su, se, sha*; in 8 *tha, sha, she, te, ta, thu*, Afr. *sha, se, sh, t*; in 9 *ti, sha, sa, za, sh, &c.*; in 10 *sha, su, se, ish, s*, in Af. *si, shi, ha &c.*

In the African systems the same definitive occurs, but less frequently. The variations are similar to the Semitic, but broad forms are more common than slender ones and contractions and inversions are rarer. Broad forms are also preserved in some of the Semitic dialects, and they appear to have been those of the archaic Semitic and of the primary Semito-African glossary.

2. The liquid *l, n, r* occurs in the Semitic 2 in the forms *na, ne, in, roh, r*, Af. *nau, nu, ng, li, il, le*; in 3, *la, lo, le*, Af. *ra*; in 4 *ar, ru*; and 10 *ra, ri, r*. In the African languages it is much more common.

3. The labial occurs as the 1st element in the com. Semitic 1 *wa, a, a*; as the 2d element in the Egyptian 3; as the 2d element in the Semito-Eg. 4 (archaically in the 1st also, it is probable); as the 2d element in the Semitic 5; as the 2d in the Semitic and Eg. 7 and 8; and as the 1st in the Eg. 10. It appears to have been secondary or servile only in the original system,—occurring both prefixally and postfixally.

8. *One.* The radical definitives of the unit in Semitic and all the African languages are the aspirate &c. and the liquid; and from the forms and distribution it is probable that they were originally variations of each other. The former, in its asp., gut. and dental forms, is the Semitic cardinal. In Africa it is also the com. Nilotic and Zimbrian root, chiefly in sibilant forms, but dental and guttural also occur. The liquid is preserved in the Arabic ordinal, and it is found in Africa in the Agau gr., Bornu and most of the Mid-African and Nigerian languages.

The labial pref., full and contracted to vowels, is found in Semitic, Egyptian, Berber, Nubian, Bornu and most of the Zimbrian tongues. Some of the latter and some of the Nilotic and N. African languages take other prefixes, dental, guttural &c. It is probable that in the oldest form of the Semito-African systems the prefix or separate def. varied with the substantive. Postfixes also occur in several of the systems. An example of the use of the labial both as a pref. and postf. is preserved in the Shangalla *me-ta-ma*.

Two. The primary root of 2 is the liquid. In the Semitic system it has only the sibilant prefix in 2. But the labial is preserved in higher numbers, 4, 7 &c. In African systems it has the full range of prefixes. In the Zimbrian fam. the labial is the most com., as it appears to have been in the earlier Semitic. The plural application of the liquid appears

to have arisen from its use as the numeral 2.

Three. The names for 3 are compounded of those for 1 and 2, and as a consequence, were capable of being varied to a considerable extent. The Semitic system had several terms. (A.) A prevalent one or one that characterised the earliest Babylono—Himyaric dialect that influenced the Egyptian—was the sibilant in its archaic broad form *sho*, *sha* with the labial postf. The final *n* of the labial may be the plural postf. In the Semitic and Egyptian 8 it is also retained. The Semitic 5 takes final *s*. The radical elements however were the sibilant, dental &c. with the labial postfix, as this compound is a common representative of 3 in higher numbers 5, 6 (3 dual in W. Zimbrian) 8 (5, 3), 10 (3d 5). It resembles some of the archaic forms of 2 more than any that are extant for 1. *Lu-ec*, *lu-b*, *su-b*, *su-ec* of Galla, Becharini &c. are strongly in favour of the *sho-m*, *tu-m*, &c. of 3 having been 2, but the guttural forms of the Semitic 5 are in favour of its having been 1. (B.) The second extant Semitic 3 is the sibilant followed by the liquid; and the third, (C.) the sibilant reduplicated, but both appear to be variations of one archaic form, the sibilant passing into the liquid. In Africa these forms are very prevalent, the first element also sometimes changing to the liquid. All these variations are referable to that form of 2 which has the sibilant prefix.

Four is also 2 in different forms in nearly all the systems. The Semitic arba, Nubian arum appear to be contractions of forms similar to *me-lu-b*, *ma-lu-me* &c. 2. The Bab. *ru-bu* preserves an archaic form similar to the Galla. The Bute *hi-ne-b* 2 (com. Zimbrian *bi-ri* &c.) is an example of a slender form similar to that of the Hebrew ordinal *re-er-lu* (*re-e=ue-b*). The *a-f-t*, *f-tu* of Eg., *fou-so* Tibbo, *o-fu-r* Saurali (*fu-en* Tunah in 9, i. e. 4, 5), *fu-lu* Kalahi, *e-fu-tsi*, *e-fu-r* &c. of Malagasy are less contracted forms. The Zimbrian 4 is also the liquid 2 with different prefixes. As *ba* represents 2 in 7 it is probable that it does so in 4 also, and if so the original of *ar-ba* must have been a reduplicated 2 in the form *bar-bar*.

Five is 3 (for 3, 2). Semitic has the A form of 3, but with the unit in its guttural form. Eg. has the dental form, but without the labial postf., 10 (2, 5) having the postfix without the root. The full form is found in 6, 7, 8 and 10 of various dialects. The com. Gallo-Zimbrian term is the B form, and it is also preserved by Semitic in 10 (5 for 2, i. e. twice 5).

Six. The Semitic 6 is 3 (dual) in the C form. It is found in a few African tongues, variable to the B form, but with these exceptions the African 6 is quinary, 5, 1 or 1. In Gadsaga and the West Zimbrian group 3 has the A form in 6.

Seven, 5, 2. Semitic has the A form of 3 (for 5) with the sibilant as in 3, and not the guttural as in 5. The Zimbrian terms are the same, but they are less contracted, and preserve both the A and B forms.

Eight, 5, 3 in Semitic (A) and most of the African languages. Dana-Ki, Shiha and several Zimbrian dialects have 4 (dual); and a few of the latter have 10 (for 2, 10).

Nine. Semitic 3 (dual), C form. The African forms are 4, 5; 5, 4; and 1 (i. e. 1 from 10).

Ten. Semitic 5 (in the B form of 3) for 2, 5. Nilotic and N. African generally have the A form. Many vocabularies only retain 2.

The general Asiatic affinities of the numerals, the relations which they indicate amongst the different groups of the Semito-African alliance, and the light thrown by them on its history, will be considered at the conclusion of the glossarial illustrations.

PART II, CHAP. VI, SEC. 5 (Continued).

COMPARATIVE VOCABULARY OF HORPA.

a. Bhotian.

1. Air. *pu ryu*, Thochu *mo-zyu*, Bhotian *lung-ma*.
2. Ant. *s-hkro*, Thochu *tu kha*, Manyak *ba ra h*, Gyarung *ko-rok*, Bhot. *g-rug ma*.
3. Arrow. *l-da*, B. *m dab, da*, T. *jah*, Takpa *m la*.
4. Boat. *g ra*, B *g ru*.
5. Bone. *reig*, T. *in-pat*. The others are broad, *rus, ru, rhu*. Lea-gian *re, ra, lu, ro*, Drav. *eruma* &c.
- 12 Day. *nye le*, G *nye*, Takpa *nyen ti*, B. *nyin mo, nyi mo*.
14. Ear. *nyo*, T. *nukh*, B. *r us*, Chepang *no*, Kar' *nho*.
15. Earth. *k cha*, B. *sa*.
16. Egg. *s ganga*, B. *s gonga*.
17. Elephant. *lam chhen*, G. *lang-chhen*, Sekpa *lhabo-cho*, B. *g-lang ch-u* (Ch.)
19. Father. *apa*, M. Takpa *apa*, B. *pha*.
- (20) Fire. *u ma'*, B. *me*, Aka *u mah* (Ch.)
21. Fish. *hya*, B *nya*, Lhop. *ngya*.
22. Flower. *meta*, M. Takpa *menta*, B *metag*.
23. Foot. *ka*, B. *r-kang pa*, Manip. *a kho*, Yoma *ka-kong* &c. (Ch.)
25. Hair. *spu*, B. *spu*, Takpa *pu*, M. *mui*, Dhimal *uui ru* (Ch.)
26. Hand. *tha*, B. *lag-pa*, Takpa *la*, M. *la p che'* Lhop. *la-pa*, G. *ta yak*, Naga *yak*.
27. Head. *gha*, B *ngo*, Gyar., Naga *ta ko*; Takpa *gok ti*, Manip. *kok*.
28. Hog. *vah*, M. *wah*, Takpa *pha*, B *phag, phak*.
29. Horn. *k uui-bo*, B. *ra*, T. *sak*, M. *ru bu*, Takpa *ru ba*, G. *ta ru*; Garo *ko rong* *Sunw gu to* &c.
32. Iron. *chu*, G. *sho m*, T. *ser mo*, Sekpa *chu mar*, B. *ichaga, chhya*, Yenis. *tu p, ti p*, Mong. *tu m ur, te m ur, thu m ar*, Saaheli *chu-m ar*, Kora *nyy*, Chin. *thiat, thi*.
33. Leaf. *ba la'*, Takpa *b la p*, B. *lo ma*.
36. Monkey. *zum da'* B. *su. tyu*, Gr. *ti*.
37. Moon. *s lik no*, G. *tsi le, chi le'*, T. *le'*, M. *the'*, B. *s la va, da-va*. The Horpa form appears to preserve an archaic consonantal softened in G, T. and M into the abrupt accent. Comp. Chin. *ngiat*, Samoiedo *i-ret, i r-da*, Chukchi *ira luk*, Pagan *lago*, Meri *leka*.
38. Mother. *ama*, B., M, T. *ama*.
39. Mountain. *ri'-rap*, B., T. *ri* (Ch.)
40. Mouth. *ya*, B., T. *kha*, G. *ti khe*, M. *ye-ba*, Ch. (Ch.)
42. Name. *s men*, B., G., M. *ming*; Takp. *myeng*.
44. Oil. *mar-nak*, B. *h-bro mar*, T. *kya mar*.
48. Salt. *chha'*, B. *chha*.
51. Snake. *phri*, G. *kha bri*, T. *bri qz*, B. *s brul*.
52. Star. *s gre*, B. *s kar ma*, M. *kra'*, Burm. *kro*.
54. Sun. *gna*, B. *nyi-ma*.
55. Tiger. *s tak*, B. *s tag, tak*.
56. Tooth. *ryo*, B. *so*.
60. Yam. *zo*, B. *du va, tho-ma*,

b. Chinese.

4. *Bird* gyo, C. chin.
 5. *Blood, eye, ach*, C. eye. (B., T., and M. have the broad form thak, sah &c.)
 10. *Cow* ngay-mek, C. ngui, also Lau, Môn.; G. nye nyi, Burm. ngi.
 18. *Eye* too, Ch. mok, Môn. mut.
 [17, 20, 23, 25, 39 and 40 are Bhot.-Chinese, making the entire number of Chinese words 10.]

c. Non-Bhotian.

- (9, 11, 13 and 34 are Bhotian in root).
 9. *Cat*, chu la' M. ma cheu. The la' is found in T. lo chi, B. byla la, N. Tangkal la me. The chu, cheu appears to be a broad form of the Thochu chi, Bhot. si of si mi. The Maring tung, Khoibu tung-kan, is the same root. Probably also it is found in the Manipurian ta khu, kho-bui, a khu, bi, sa khwu, tiger. The byi, me, mi, bi, bui in the above words is a generic term for quadruped.
 11. *Crow*, kale, M. kan, Sokpa khere, Mishini tsa kla, Champh. khala, Garo koura. Serpa has ka lak (Bhot. ab lak, Gyar. ta b-rok) Sansk. kara-ta. P root kara, kala &c. black.
 13. *Dog*, kau', Koriak gotian, Hind. kutla, Austr. kota (see Manyak)
 24. *Goat* ehhe, T. M. tsah, G. ku so, Chepang mi cha, Dhim. ee-cha, Aka shu ban &c.
 30. *Horse*, rhi, ryi, Sokpa ma ri, T. ro', Gr. bo ro', M. do ro', bro' (Ugr. lo, lu. log)
 31. *House* hyo, Karen hi, Mon he, hien.
 34. *Light* s phoi, Mon Anam sa wang &c, Tak. wot, M. wu', T. uik. (root Sey-hie)
 35. *Man* ez-h, Deor. Ch mo si, Kyo ma chi, N. Tangk pa su, Jili n saou, Naga me song, Sulu u-ug, Fin shiesi, Yokahiri kun shi, Turk. ki shi, Lesgian chi, Abasian ka izha
 41. *Mosquito* vaa, Karen pauso, Kambojan moa, Sansk. mashaka (a common root for fly &c.)
 43. *Night* s pha, Manipuri Dialects amya, mea, Samoiede po.
 46. *River* hra', T. cha h-a', M. dya', Tablung Naga riang, Mikir lang pi, Champhung nrai (see Water).
 47. *Road* che', Angami Naga chah.
 49. *Skin* ala, M. gra', (P g lu, g ra see Thochu). Mozome Angami bi khar, Sindh, Hind. khal, Ostiak kur parga, Lesg. kuli, Malay &c, kuli.
 40. *ky-ko.
 53. *Stone* r game. The gutt. root is common, but with l as the final. Fin has kiw.
 57. *Tree*, nah, Mon ka non, Aino nyh, Pashtu ona.
 58. *Village* rhava.
 59. *Water*, hra', Chepang lang, Naukowry rak, Newar Yenla, la, dok, ur, ul, Turk. yrratsch, ic-mak.

COMPARATIVE VOCABULARY OF THOCHU.

a. Bho'ian.

1. *Air*, mo zyu, H. pu ryu, B. lung ma; Manipuri ma su &c.
 2. *Ant*.

3. *Arrow.*

5. *Wood.* sa', M. sha', B. thak, (Tungus. *shok sho. eug al. sho-ma*), Singfu sa, B. oua za, zain, Lombu lak shok-pa (Comp. *Water duk Ya-mie, dak. tak &c.* Kambujan group).

7. *Bone* r-pa t. B. ror-pa, Hor. rera. The slender form is not found in minor T.—U. vocabularies, save Lepcha *a-sh-t*, but it is Samoiedic, Uraian ly, Caucasian h ka, and it also occurs in Asomeric, i Tarawa, and E. ab. r. ut Sabor. The double postf. resembles that of the Galla *lo fa ti*. The double Horpa *re-ra* resemble the Caucasian *lu-l*, and Komien *to-ler*, the original of the last being probably the T.—U. long, *Ahor*.

9. *Cat.* lo-chi (see Harpa).

12. *Crow.* nyag-wo, Bh. sp. ab-lak, Champhung chag-lak, Rakhoning tchag-in, Mishmi tsak-la, Singphu takha, Garo dakh, Bodo doukha, tauka.

13. *Day* khwa', Bh. khyi. The slender form is the most common in the south. The *u* or *w* is preserved in the Burman khwe; Singphu kwi. The Cauc. gwai resembles the Thochu form.

15. *Earth.* zi-p, Bh. sa, G. se'; Jap zi, tsi, Ch. ti &c, Sam. tochia, ja, Turk sir.

20. *Fire.* me', Bh. ma, me.

25. *Hair.* grong, Bh. kra

26. *Hog.* pi, Bh. j-hag, Chepang piak.

27. *Horn* rak, Bh. ra, Changlo wa-rong, Uraon ma-rag, Ultr. rang &c.

31. *House.* ki', Bh. khyim, Suwa. khi, Kar. hi.

34. *Light.* aik, Bh. hwe.

42. *Name.* r-ma', Bh. ming, Naga-Manip. ming, mang, man.

43. *Night.* a-sha, Bh. m-tshan-mo.

47. *Road* g-ri', Gyar. i-ri, Bh. lam, M. ra'.

48. *Salt.* che', G. chhe, M. che', Bh. tsha, chha, Horp. chha', Tak-pa tsa

49. *Skin.* ra-pi, Bh. pag-pa. (The *ra* may be the Horpa *g-la*, M. *g-ra'*), Singpho, Karen phi, Murmi di-bhi, Mozome Angami bi-khar, Bodo bi-gur, Garo bi-gil, Yuma moe-pik, Ch. phi.

51. *Snake.* bri-pi, H., G. also slender. Bh. s-brul

56. *Tooth.* swe', G. ti-swe, Bh. so. Burm., Murmi swa, Ch. ch'hui khi, Ugr. shu-pun.

57. *Tree.* gwo-zoxi, Gr. shi, M. sa-poh, Bh. i-jon-shing, shin-dong, Ch. shi.

59. *Water.* chah. Bh. chhu.

b. *Chí ese.*

18. *Eye.* kan, Ch. gan. Drav. kan.

22. *Flower.* lam-pa', Ch. a, hua, Kar. kha.

35. *Man.* m', Anam ngoe, Ch. lang, male, ung, nan, husband (See 10, 13, 15, 44, 55)

c. *Non-Bhotian.*

4. *Bird* mar-mo, Drav. par-va, Angami Naga para, Samoiedic mari-mane, Osetic mar-g, Pashtu mir-ge, Hind. mar-gh.

6. *Boat.* phyu, ? p-lu Tibeto-Ultr. Car Nicobar la-ap.

10. *Cow* gwa', Pashtu ghwa, Lau ngua, Mon nua, Lhop. ngo, Chin. ngui, go &c.

12. *Day*, styak-lo, Lepcha sak-ni, (*sun*, sa-chak, Limbu, *sky*, tant-sak-pa,)
14. *Ear*, nukh, Karen naku, N. Tangh nakor, Mishmi nakru, Limbu neko, Ch. Tibeto-Ult. na [Fin, *face*, nak, nyako]
16. *Egg*, ki-wost (? ki-wost "egg-of-bird"), bird Singh wu, Naga vo, egg Newar khyen, Ugrin ai, Siam khei.
19. *Father* ai Ugrin ai.
21. *Fish* izha', Yenis. isya, isse, Aho zis-t, Ugr. zen, Mong sa-ga-sun; Nias, Paser isa', Philip isda, sida, siru.
22. *Flower* r. lam-pa', Ch. ta, hua, Kar. pha, Garo, Yuma par &c.
23. *Foot*, jako, Turk ajak, Garo *foot* jak, Kasia ka-jat, Sinang chat.
24. *Goat*, tsah, M. tsah (see Horp.)
- 25a. *Hair*, ho-m-pa, Ugr. yop, Samoiede hopt, Turk. mui, Ultr. som, Newar song, Lepcha achom.
- 25b. *Hair*, kachu, Sok kachi-ge, Koriak ketschu-gui, Sanskrit kesha; Naga kocho, Kar. khosu.
26. *Hand*, jipa', Magar hat pink, Turkish *finger* shar-bag, Manip. D. pang, pan, bun.
27. *Head*, kapat; Comp. *hair* Sam. hept, Ugr. upat, opta &c, *head* Indo-Eur. kopf, hoïd, caput, kapala &c.
30. *Horse*, ro', G, M, bo-ro', H. rhi (Ugr. lo, see Horpa.)
32. *Iron*, sormo, Garo shur, Bod. shor, chur, Dhim chir; Korea euy, Tangus solo, zhila &c., Sam. sommaya, suaheli chumar (see Horpa.)
33. *Leaf*, thrompi, ? Tib. loma, Ugr. lop, lopta &c.
36. *Monkey*, wai-si, Sokpa me-chu, Singpho we (si is *man* in Horpa a-zih, and ti is *monkey* in Gyar.) Comp. Naga si-mai, mai-nak, Abor, si-beh &c.
37. *Moon*, ebha', Sokpa sara, Yenis. chaip, Manip. kachang, Mien ga-tchang, Garo ju ("star" Chin. ch'he, Karen sha &c.)
38. *Mother*, ou, Osm. Turk. ana, Ugr. awai, Sam. eo, Manip. D. nea, onu &c.
39. *Mountain*, spya', (? s-pyu), Sokp. tava, Turk. tapa, tuba, nba, aba, tope, Manip. kaplung, bom.
40. *Mouth*, dzukh, Yenis. b-yuk-ken, Sam. hek, Cauc. laku, Kamsch. shak-sha, tsch-na, Koriak shok-shen, Ugr. shus, &c, Fin su, sun &c, Chin. sui &c.
41. *Mosquito*, heup. (The labial root, single or reduplicated, is *mosquito*, *fly*, *bee* &c. in many languages.
44. *Oil*, ching-yu, Ch. yu.
45. *Plaintain*, sarini.
46. *River*, cha-bru', H. bra, Kiranti, Sam. tscha-ga, ja-cha, cha-wa; Tang. anur; bera &c; Sambawa brang.
50. *Sky*, makto, M. ma', G. tu-mou, teu-meun.
52. *Star*, ghada, Mishmi-kadung (? Bhot. jo. kar.)
53. *Stone*, ghol-opi; Sokpa chhilo, Takpa gor, Many. wobi.
54. *Sun*, mun; *Sky* G. mon, Gurung mun, Singpho &c. mu, Miri do-mur; Fin poi-wa, pew, Sad. fi.
55. *Tiger*, kho, Ch. hu, Gvami khu, G. kong, Ultr. kya, &c.
58. *Village*, wekha, G. wókhyu.
60. *Yam*, jyah.

COMPARATIVE VOCABULARY OF GYARUNG.

a. Bhotian.

2. *Ant*, Bhot. *grogma*, Gyar. *korok*; Takpa *rok-po*.
 4. *Bird*, B. *hyu*, G. *pye-pye*, Takpa *pya*.
 6. *Boat*, B. *gru*, G. *bru*.
 7. *Bone*, B. *ruspa*, G. *sya-rhu*, (Manip. *sa-ru*).
 11. *Crow*, B. *ablak*, G. *tabrök*.
 12. *Day*, B. *nyinmo*, *nyimo*, G. *nye*, *pish-ne* [*pish Chin*].
 13. *Dog*, B. *khyi*, G. *khi* [*Ch. khian*].
 14. *Ear*, *rua*, *na*, G. *tirne* (Angami Nag. *anye*) [*Ch. ngi, li*].
 15. *Earth*, *sa*, G. *se'*.
 17. *Elephant*, B. *thung-chen*, G. *lang-ehhen* [*Ch. chhiang*].
 18. *Eye*, B. *mig*, *mik*, [*Chinese mok*], G. *tuiz-myek*, *tam-myek* [*the G. form is also Burm.*].
 19. *Father*, B. *phu*, *pala*, G. *tape* Burm. *phae* [*Ch. pe, bo*].
 20. *Fire*, B. *ma*, *me*, G. *tim* [*Chin. we, Aino aee, Fin. bi, com*].
 21. *Fish*, B. *nyu*, *nga*, G. *chu-ngyo*.
 26. *Hand*, B. *lagpa*, G. *tayak*, Naga *dak*, *yak*.
 27. *Head*, *mgo*, *go*, G. *tako*.
 29. *Horn*, B. *ra*, G. *taru*.
 31. *House*, B. *khyim*, G. *chhem*.
 35. *Man*, B. *mi*, G. *timi* [*Fin mis, Cauc. mi, me, ma, Galla mi*].
 36. *Monkey*, B. *sprebu*, G. *she-pri*.
 37. *Moon*, B. *zlava*, *dawa*, G. *tsile*, *chileh*, M. *lheb*.
 38. *Mother*, B. *ama*, G. *tamo* [*Ugro-Kuril &c.*].
 40. *Mouth*, B. *kha*, G. *tikhe* [*Ch. khau, Yenis. ko, Semit. kho &c.*].
 42. *Name*, *ming*, G. *tiriming*.
 47. *Road*, B. *lam*, *lan*, G. *tri*, Thochu *grih*, (Karen *kle*, Khari Naga *ndi*).
 48. *Salt*, B. *tsha*, *elha*, G. *elhe*. [*Sam. si, sak, Ugr. sow, sal*].
 51. *Snake*, B. *shrul*, *deu*, (M. *bru*, Takpa *mirui*), G. *khabri* H. *phri*, T. *brigi*.
 53. *Stone*, B. *rdo*, *do*, G. *rugu*, (Ultrad. *lung*, *long &c.*).
 54. *Sun*, B. *nyima*, G. *kini*.
 56. *Tooth*, B. *so*, G. *tiswe* (Burm).
 57. *Tree*, B. *hon-shing*, G. *shi*, Chinese *shi*, *chang &c.* Kamch.
 59. *Water*, B. *chhu*, G. *tichi*, Takpa *shhi*, [*Chin. chui*].
 60. *Yam*, B. *thoma*, G. *seten*.

b. Chinese.

3, 5, 10, 13, 15, 17, 18, 20, 26, 47, 52, 55.

c. Non-Bhotian.

1. *Air*, *tali*; Burman gr. *tali*, *kali*, *khli*, *le*, Turk *tyel*, Ugr. *il*, *li*, *Uma &c.* [*"Wind" Turk. il, di, yil, vel, Ugr. tal, tul, til, tuuli &c.*].
 3. *Arrow*, *hipi*; Garo *phi*.
 5. *Blood*, *tashu*, Gyami *syu*, Nag. New. *si*; Chin. *chiue*. [*Tib thak*].
 9. *Cat*, *tarhu* (? a misprint).
 10. *Cow*, *nye-nye'*, Gyami *neu*, *nyeu*, Ch. *ngui*, [*Turk. ona, ina*].
 16. *Egg*, *kāan*, Gyami *chi-tun*, Chin. *tan*, Anam, N-Ultr. *ting*.
 22. *Flower*, *tau-den*; Kas. *sin-tin*.
 23. *Foot*, *tami*, Takpa *leni*, Changlo *bi*, Naga *uphi*, Manip. *chapi*.

phai, wang, Milch bung, Nipal Dial. pali, bele &c., Aconec. val, wai &c., Malag. fe, pe, Indo-Eur. pad, pes, foot &c., Ugrian pilga, Sam. tovol, tobo.

24. *Goat*, kawo (see Manyak).
25. *Hair*, taroi, Khyeng inang, Acon oli, uiri &c.
26. *Hug*, ki, Aber ik, Naga ak, Gyami tiko, Ch. ti, chi.
33. *Leaf*, tai mek.
39. *Mountain*, tavet, Mongal dybe, Turk. taw &c (see Manyak).
43. *Night*, todi, Angami Naga ti zi, asang dai, Turk. tin Mong. ei, auni &c.
46. *River*, tichi, Takpa chbi (see *Water*).
49. *Skin*, ti tri, Dhimal dole, Turkish diri, dari, tire &c., Ugr. tonl &c.
50. *Sky*, tumoe, tee meun, T. mabto, M. mab, Burm. greup mo, mou, mi &c.
52. *Star*, tsini, Naga le tai, pe. ti &c. Chinese sim, Yuma gr. kasi, a. zhi &c. Turkish sylris, ildis &c. Ugr. sili &c.
55. *Tiger*, kong, T. knob, Gyami khu, Nag. takhu, khu, Chin. hu, ho.
58. *Village*, wo khyu, tu khyu.

COMPARATIVE VOCABULARY OF MANYAK.

a. Bhotian.

The Manyak forms, it will be remarked, generally resemble the more slender of the Ultrabhoian and not the Bhotian.

2. *Ant*, B. grogma [G. korok] M. barh, (Ahor marang, Magar mahr, Aka tarak, Manip. group langza, chaling, miling &c. Khumi palong, Silong hedam).

3. *Arrow*, B. malah, da, M. ma (Burm., Magar mya, from *ma* Burm., Kiranti me).

4. *Bird*, B. chya, M. ha (Nag. ou-ha, au-ha &c., Mrung bo, hau).

5. *Blood*, B. thok, M. shah (Thochu sah, Horpa sye, seb, Gyami sye, Gyarung tashi)

6. *Boat*, gru, M. gu (Gyarung bru, Ultr. ras, rung &c.)

7. *Bone*, B. s. rukö, M. rukhu.

10. *Cow*, B. ba : M. wo-mi (Anam bo, Siam woa. In Manipuri, Yuma &c. woi is used generally with names of quadrupeds, as mi is with those of the cow and buffalo in Manyak. The Anam and Lau names of the cow appear to have been derived from the Tibeto-Ugrian ba, mus—whence bo—through the Manyak form).

14. *Ear*, B. rnawa, na, M. napi, (Naga, Burm. &c.)

19. *Father*, B. pha, M. apa con.

20. *Fire*, B. ma, me, M. same' [Nag. mi &c.]

22. *Flower*, B. metog, mentok, M., Takpa mento.

26. *Hand*, B. lag-pa, lango, M. lap-sheh, Takpa la.

28. *Hag*, B. phag, phak, Horpa vah, M. wah, (Angami Nag. the-vo).

29. *Horn*, B. ra, rafo, Horpa hrumba, M. rubu, Takpa ruba.

31. *House*, B. nang, M. nyeh, (Deer. Ch. nya, Bodo noo, Naga nok.)

32. *Iron*, B. chhya, M. shi.

33. *Leaf*, B. loma, Horpa balab, Dhimal lhawa, Takpa blap, M. nipeheh, Naga nyap, ponye.

34. *Light*, B. hod, hwe, eu; Thochu uik, M. wuh, Takpa woi.
 37. *Moon*, B. zlava, M. l'eh (Naga lo).
 38. *Mother*, B. M. ama. (com.)
 42. *Name*, B. M. ming.
 47. *Road*, B. lam, lanr, M. rah.
 48. *Salt*, B. tsha, chha, Thochu, Gyar. Many. cheh,
 51. *Snake*, B. sbrul, M. bru.
 52. *Star*, B. skarma, karma, M. krah, Horpa sgre.
 54. *Sun*, B. M. nyi-mu.

d. Chinese.

4, 10, 20, 21, 47, 55.

e. Non-Bhotian.

1. *Air*, merdah, Naga ru, rang &c. Dophla dori, Burm. li, le, la &c. Drav. lu. The broad form of M. is Naga, Drav. and Aino. The slender form of Gyarung and the Burmese group is Turkish, Yukahiri &c. The Tibetan form of the common root is distinct, *rlungma*, *lhakpa*, the latter being connected with the Naga-Manyak form.

8. *Buffaloe*, ding-mi, wo-mi, "cow"; Kar pi "cow", Dhim. pia, Newar &c. me "buffaloe". Ding is peculiar, unless it be a misprint for ling.

9. *Cat*, machen; Dophla ache, Naga mochi, Bodo mouji, Mong. michoi, Korea kai, Ugr. mishok &c.

11. *Crow*, kali; Horpa kala, Sokpa khare; Champh. khala, Mishmita-kla, Garo koura (? Asam, Beng.) The term is Scythic, Indo-Eur., Semitico-Afr., and Aonesian.

12. *Day*, nash-hah; Bodo shyan, Garo, Naga, Yuma san, Tiberk. zhagnia ["Sun" in other dialects]

13. *Dog*, kshah, Horpa katal, Naga tasu, az &c., Nipal dialects hu-shu, tochu &c. [Yenisei. il-tsha, Kamch. ko-shu, Root N. E. Asian, Scythic, Cauv., Indo-Eur., Semitico-Afr., Ason]

15. *Earth*, mali, mi; Naga ali, Manip. malai &c., Kyo ni, Burm. mre, Mish tari [Turk. yir, er, Korea chli.]

19. *Egg*, racha (? cha "bird", Tib. chya), Korea ar, al.

18. *Eye*, mui, Mru. min (? from Tib. mik, like the Dhim. mi, or from the Mong. nidu by contraction, Kamch. manin, Jap. mey, mamiga = Tib., Korea nun, Mong. nudun, nidu &c.)

21. *Fish*, yn, G'yami yue, Chin. hu.

23. *Foot*, fu-cheh (see "hand"), Garo. chap-lap.

24. *Gout*, tsah, T. tsah, H. ehbe, kaso, Ahor sa-ben, Dhim. eechu, Anau, Kamboj. sha-hain, Kashin. shawul, Burm. sheik; si.

25. *Hair*, mui, Dhim. mai tu, Horpa spu, Takpa hu, Turkish mui.

27. *Head*, wuli, Dhim. puring, Khari Naga kelim, Manip. lu, Ahom ru, Yukahiri ulu, monoli &c. Ugr. yor, yir &c.

30. *Horse*, boroh, broh, G. boroh, T. roh, H. rhi, ryi, Mong. mori &c. Tung. maron &c., Korea mol.

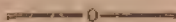
35. *Man*, chohoh, Changlo songo, Naga saun-yak, mesung; Ugr. chu, choi, Aho chogu.

36. *Monkey*, miyahah, ? Dhim. nhoya.

39. *Mountain*, mbi, Khari Naga apih (T. spyu', Sokpa tava, G. taver, Mong. dybe, Turk. taw, tau, uba, Yuk. li. pea, Sam. bija

40. *Mouth*, yeba, Sokpa an a, Mong. amu, aman, Tung. unga, Ugr. um, ou, in, wom &c. Naga amu, tabang, tebaun.

41. *Mosquito*, bimo, T. beup, ? Angami Nag. viru.
 43. *Night*, kyakah, Kir. khakwe, Gyami khe-lo.
 44. *Oil*, ichira, itira, Dhim. chuiti.
 46. *River*, dyah, Bodo doi (see *Water*).
 49. *Skin*, grah, Horpa gla, Thochu rapu, Sokpa saru, Mozomi Ang. Nag. bikhar, Bodo digur.
 50. *Sky*, mah, Thochu mah-to, Gyar tu-mon, Turk. awa.
 52. *Stone*, wohi, T. ghol-opi (Takpa gorr; gol &c. is Tatar, Korea, Kamch, Yakahiri and Ugrian in different forms; pi, pe &c. is Samoiede, and Aino).
 55. *Tiger*, lephe.
 56. *Tooth*, phwih (? Gyar. tiswo, Thochu sweh), Burm. thwa, Takpa woh, Kani afhu, [Tungus. wei-che, Jap. fa, Ugr. pui, pu &c.]
 57. *Tree*, sapoh, Nag. peh, ran, Burm. apen &c., [Turk. iwos, Tung. mo, Kamch uo, Sam. po, pu, pe, Ugr. pu, eu, fa &c.]
 58. *Village*, hu, Takpa yu.
 59. *Water*, dyah, [? G. ti-chi, Takpa shhi, B. ehhu Chin. sui, cheu &c., Bodo doi, Yama tui, Nag. tu, ti, si &c., Sam. tui, Tartar su, zu, dsu, she &c.]
 60. *Yam*, zgwah.



SEC. 6.

THE GLOSSARIAL CONNECTION BETWEEN ULTRAINDO-
GANGETIC AND TIBETAN.1. *General remarks on the Bhotian affinities of the
Gangetic and Ultraindian languages.*

The Ultraindo-Gangetic vocabularies present two classes of Bhotian affinities, each of which has two branches.

The 1st class consists of words, or forms of words, immediately derived from Bhotian, and at least two branches may be distinguished, viz. vocables derived from the modern Bhotian, and vocables derived from the ancient or written Bhotian. If, as is probable, the strong phonology still prevailed throughout the Bhotian province at the time of the first great irruptions into India, it is not necessary to assign an older date to the vocables of the second branch than the earlier centuries of the Christian era. Indeed they may have continued to be imported to a much more recent period, and may possibly be still received into some of the Himalayan dialects if the old phonology be retained by any of the Kam-pai who migrate to this side of the snows at the present day. Whether Western Tibet directly sent vocables to the southward before the age of the Himalayan conquests is a question that cannot yet be answered.

The 2d and most important class of Bhotian affinities are those which exist in the Ultraindo-Gangetic vocabularies not because they were received from Bhotian, but because the Northern linguistic stock of the tribes which use them was closely allied to the Bhotian, both having for basis a common formation. They may be now considered as Sifan.

These archaic Tibeto-Ultraindian or Sifan vocables possess two forms, one characteristic of that modification of the formation which it had when it first came in contact with the prior Mon-Anam formation of Ultraindia, and the other peculiar to the Burman branch, which appears to have spread to the southward and westward at a more recent period, after having long remained secluded and comparatively pure in the North Eastern part of Ultraindia or the adjacent Sifan mountains. The older diffused forms are generally full and dissyllabic, and the first syllable is frequently a definitive prefix. The later forms are remarkably curt, and in this respect contrast not only with the older, but with the Bhotian, the latter having prefixed consonants and frequently adding a postfix to monosyllabic roots. I will proceed to consider each of these varieties of the Bhotian affinities more particularly.

The absence in Indian history of any notice of the modern irruption of the Bhotians into the Himalayas and the plain of the Ganges, of which positive but faint historical evidence exists in Chinese books, exhibits its partial and untrustworthy character in a strong light. It has preserved no distinct record of an event of so much importance that it gave to the Himalayas a new people and new dialects, subverted the ancient dynasties of the plain,—Arian, Dravido-Ultraindian or Arianised,—and led to the establishment of a Tibetan dominion, which lasted so many centuries in Bengal as to affect not only the ruder languages near the mountains, but, in a very slight degree, Bengali itself. If a revolution of this kind, that began some centuries later than the commencement of our own and of the prevalent la-

dian era, has been suppressed, how much caution is needed in making any historical use of the Hindu chronicles. The degree in which the proper Bhotian glossarial forms of the Tibeto-Ultraiudian formation have been diffused to the southward of the Himalayas sufficiently appears from other Sections. The ancient or written forms are frequently found in Lhapa and Sera and sometimes in the less Bhotised languages of the Himalayas. The modern forms of Lhasa and Digarchi have been partially spread by Bhotians among the Himalayan languages, but very few examples are found in the Middle and South Gangetic or in the Ultraiudian languages. The ancient Bhotian forms have been sparingly diffused from Bhutan among the middle Gangetic and the adjacent North Ultraiudian languages. The prevalent Ultraiudian forms of the Tibeto-Ultraiudian roots sometimes agree with the Bhotian but more frequently differ from them, and most of those which agree with it are too widely diffused, and are, in many cases, of too essential a character and too intimately blended with the Ultraiudian glossarial systems, to have been recent derivations from Tibet or Bhutan. Many have now been found in Sitan vocabularies also, and it is clear that such forms were carried southward by the oldest migrations from Tibet, which must have long preceded the Bhotian invasions of our era. Every great glossarial formation exhibits a preparation of roots which preserve an identity in form in separate provinces and after an extent of diffusion which it must have taken many thousands of years to effect. The Aryan languages, in their archaic affinities with African, N. Asiatic, N. E. Asiatic and other remote languages, afford striking illustrations of this.

The glossaries of the Ultraiudian and the connected Indian languages are exceedingly mixed, a necessary result of the single intrusive Ultraiudian race having partially blended at least three distinct linguistic formations, the archaic Dravido-Australian with its modern N. E. Dravidian branch, and the imported Mon-Anam, and Tibeto-Burman. Every attempt at an exact separation of the roots belonging to these several formations must prove to a certain extent a failure, because all had archaic affinities. Thus the Dravidian had Tibetan and Chinese affinities, and the Mon-Anam languages must have had archaic connections with the adjacent languages of the Tibetan family before either of these branches of the Chino-Tibetan or Himalaic stem was carried over the mountains into Ultraiudia and India. But it is possible to make a rough approximation to such a separation, owing to the circumstance of the Tibetan vocabularies still extant in Tibet and the Dravidian vocabularies of Southern India having preserved certain portions of the ancient glossaries of two of the formations comparatively free from Ultraiudian intermixture. In the case of Tibet it is not probable that its archaic vocabularies have been affected by the non-Sanskrit languages on this side of the Himalayas, and although Southern India is much more exposed, the general effect of all the ethnic evidence is against the Ultraiudian tribes and languages having influenced the peninsula beyond the Vindhyas to any notable extent. Having already partially traced the Dravidian vocabularies in Ultraiudia, the first step towards ascertaining the probable extent and diffusion of the Mon-Anam glossarial remnants will be to separate from the Gangeto-Ultraiudian vocabularies those words which clearly or probably belong to the Tibeto-Burman formation.

The Bhotian affinities of the various vocabularies of the Burman fami-

ly and of Ultratindia generally, are, with a very few exceptions, archaic. Taken with the large amount of disagreement that remains amongst these vocabularies, after excluding the Ultratindian words of probable Dravidian, Chinese, and Aonesian origin, they prove that the Tibeto-Ultratindian formation embraced several languages possessed of vocabularies that differed considerably. This indeed might have been anticipated. At the remote era when Tibeto-Chinese or Scythoid tribes began to descend into Ultratindia, it is not at all probable that any civilisation prevailed immediately to the north of the Himalayas sufficiently advanced to have established one nation and one language over a region so cold, arid and mountainous. The western progress of the Chinese may in time bring about such an event, but it may be considered as certain that it has never hitherto existed. At present there are several dialects in Tibet itself, and, according to Chinese authorities, several also in the adjacent provinces now embraced in western China. Where there are now five distinct vocabularies there may have been more than double that number when the tribes of this region first began their movement into Ultratindia. In estimating the amount of the archaic glossarial affinity between the Ultratindian and the Tibetan languages, we must allow something for the words that may have been conveyed by Bhutians into Ultratindia since they became so civilised as to carry on a traffic with the upper tribes of the Irrawadi, such as the Mishmi.

2. The General Connection between the Gangeto-Ultratindian and the Sifan Languages as Dialects of the same variety of Tibetan.

With our present imperfect information respecting the East Tibetan and Gangeto-Ultratindian languages, a detailed grammatical comparison is impossible. In Secs. 1, 2, 3, 4, 5 and 6 of chap. IV. I have shown that the North Ultratindian and the Gangetic languages are intimately connected in structure, so far as their structure is known, as well as in pronouns, numerals and other particles; and that they all belong to the Tibeto-Burman family, although a variable but slight archaic Indian or Dravidian ingredient is found in most of them, and some have been influenced by the Mon-Anam formation. The presence of a large Bhutian element was indicated, but many common traits were found to connect the Ultratindian with the Gangetic languages which could not be referred to Bhutian, and which pointed at a derivation of the primary Ultratindo-Gangetic variety of Tibetan not from Bhutian but from some archaic eastern branch of the Tibetan formation.

Referring to chap. IV. for an examination of the structure of the Gangeto-Ultratindian dialects, it is only necessary to add here that the Sifan languages that have since been brought to light by Mr. Hodgson prove to be representatives of that Eastern branch of Tibetan from which the Ultratindo-Gangetic dialects were mainly derived. At present very little is known of their grammars, and it would be premature to conclude that any of these Sifan languages was the immediate parent of all the allied Gangeto-Ultratindian. It is clear that the latter are primarily and principally dialects of the Sifan and not of the Bhutian branch of Tibetan, but there must have been a great lapse of time since the Sifan tribes first began to cross the mountains; dialects may have existed then in Eastern Tibet which are lost now; and the surviving dialects have probably been modified by internal change, by movements amongst the pe-

tive hordes and by the influence of the surrounding Bhotians, Tartars and Chinese. For the present we must be satisfied with the conclusion that the Sifan and the Ultraindo-Gangetic dialects are all sub-varieties of one East Tibetan dialect, but that many of the Ultraindo-Gangetic have been more or less modified by the influence of Bhotian since they first spread into the basins of the Irawadi, the Brahmaputra, the Ganges and the upper Sutlej. Some light will be thrown on the successive phases and migrations of the southern dialects by our glossarial comparisons.

The little that is known of the structure of the Sifan dialects has been given in the preceding Sections. All the traits that distinguish them from Bhotian are found in the Ultraindo-Gangetic languages. The principal is the large use of vocalised prefixes. The identity in these prefixes, in the non-Bhotian pronouns and in the particles generally, belongs to the glossarial comparison. The somewhat more Scythic character of the phonology also connects the Sifan, or at least the Gyarung, with the more harmonic of the southern languages, as the Bodo and Dhimal. The postfixal agglutination of the pronouns is a Scythic trait, which must now be considered as of Sifan, and not of Dravidian, origin, in the Dhimal and Naga dialects in which it has been found. The existence of a dual or inclusive plural of the 1st pron. in Manyak and Thochu connects the Sifan idiom with the Scythic on the one side and the Dravidian-Australian on the other. Mr. Hodgson has found it in the Himalayan dialects of Kuswar, Hayu and Kicuati (*Journ. As. Soc. Beng.* 1853 p. 62), so that it may prove to have been carried by the Sifan tribes to the southward. The Ho, Santhal and Oraon forms to which Mr. Hodgson also refers, are Dravidian, and not Manyak, Thochu or Scythic.

In referring to chap. IV. it will be born in mind that the Sifan vocabularies have now greatly increased the ascertained Tibetan element in Gangetic-Ultraindian, and, as a consequence, diminished what I had considered the Dravidian. The phonology and pronouns may now be held as mainly Sifan, although some Dravidian ingredients are still recognizable (see chap. V. sec. 11).

The general ethnological inferences may be briefly adverted to in this place.

The first conclusion to be drawn from the ascertained facts is that during an era subsequent to that in which the Mon-Anam formation became predominant in Ultraindia, Tibetans crossed the Himalayas in large numbers and acquired an ethnic position and influence in Northern Ultraindia and the Gangetic basin. The Tibetan language in its integrity was transported to this side of the snows, and, through the dispersion of the Tibetan tribes, gave rise to new dialects, and deeply and variously affected the prior Gangetic-Ultraindian languages. In many of the existing cis-Himalayan dialects we find Tibetan pronouns, particles and ideologic usages, while the miscellaneous Tibetan verbles form an ingredient, generally very considerable, in the glossaries of all the Ultraindo-Gangetic tongues. Although no single mixed vocabulary appears to be more than one half Tibetan, it is probable that the greater part of the Tibetan glossary was at one time current in the southern dialects, or was interfused amongst the different native languages which came under their influence.

An influence so great, and embracing so many languages from the

Milchawang to the Singpho and Lau, could not have been exerted by a Tibetan tribe which was confined to the mountains, like the present western Bhotians and eastern Lhopas. Tibetans or Tibetanised Himalayans must have descended into Ultraindia or India and acquired a political and social predominance over a considerable area.

The second inference is that the diffusion of Tibetan elements on this side of the Himalayas has not been caused by a single movement of a Tibetan tribe confined to one era. These Bhotian irruptions into the sub-Himalayas and India which may be regarded as historical have produced a comparatively small influence. Although it has been continued until the present time, or for about twelve centuries at least, owing to the permanent advance of the Bhotian ethnic frontier into the sub-Himalayas, it has failed to assimilate the conterminous languages of that tract. From the Tibarkhad to the Abor a nearly uninterrupted band of languages is preserved, which retain non-Bhotian forms of pronouns and particles, and two thirds of the vocabularies of which appear to be non-Bhotian. Even the most eastern of these languages, as the Daphla and Abor, which are spoken by highly Bhotoid tribes, have a very considerable basis of non-Bhotian traits in phonology, glossary and ideology. In the Gangetic plain the influence of Bhotian has been still less. It is obvious, from these facts, that the pure Bhotian tribes and languages of the sub-Himalayas have always been separated from those of the plain by a barrier of only partially Bhotised languages. In Bhutan the influence of the historical Bhotian advance to the southward has been more powerful and extensive than in Sikim and Nipal, but the physical and linguistic character of the Boda and Dhimel shew that beyond the mountains it was comparatively feeble and superficial. In the basin of the Irawadi and the connected western territory as far as Bengal and the Bay,—the tribes of which are entirely separated from the Bhotians by intervening ones and are less Bhotian in person and customs than some of the Himalayan tribes,—we find that the Naga and Yoma vocabularies are twice as Bhotian as most of the Nipalese. The Mishmi, Jili, Singpho, Naga, Yoma and Garo appear to have a direct glossarial connection with Bhotian—whatever may be the chronological and ethnic relation of the Tibetan movement which induced it—distinct from that which Tibetanised the more western languages. But to ascertain this relation satisfactorily it is necessary to advert to the non-Bhotian traits of the Naga, Yoma and of the Gangetic languages, and these will be discussed in a separate Section.

In the following details my principal object will be to shew the extent to which Tibetan enters glossarially into the languages of Ultraindia and India. In the comparative lists in the Appendix, compiled before the publication of Mr. Hodgson's Sitan vocabularies, I had indiscriminately entered all words that have Bhotian affinities. A few are thus included of which the derivation from Tibet may be doubted, Mid-Asian and other remote languages having forms that are nearer the cis-Himalayan, while others are given which now appear to be Sitan and not Bhotian. But making every allowance for these, this Section with the Appendix will afford a general view of the influence which the Sitan and Bhotians have exerted on the vocabularies of Ultraindia and India from the era when they first found their way across the snowy barrier.

3. Pronouns.

The Bhotian pronoun of the 1st person, *nga*, *na*, prevails in most of the Himalayan languages and in Ultraiidia, but as it is not common in the Naga dialects, it is improbable that the Ultraiidian *nga* is of immediate Bhotian origin. I should rather have supposed that in some of the eastern Himalayan dialects it was of Ultraiidian and not of Bhotian derivation. The influence of the Gangetic Bhotian of the Pal era on the Burman family was far too slight to have extirpated the ancient Burman pronoun of the 1st person throughout all the Burman dialects. The Burman pronoun agrees with the Bhotian and Chinese (*ngo*) because all have ultimately derived it from the same mother formation.

The origin of the Ultraiido-Gangetic *nga*, *na* &c. has now been set at rest by the Sitan vocabularies.

The Bhotian 2nd pronoun, *khyod*, *khyo*, *khe*, has been carried by the Bhotians into most of the Himalayan languages, but not beyond them. This pronoun is of itself almost decisive as to the relation of the Ultraiidian to the Bhotian, and of each to the Gangetic languages. The Burman *nang*, *na* is found in several of the Naga languages, in Garo, Bodo, Dhimal, Abor, Miri (*no*, *nun*), Daphla (*no*), and even in Magar (*nang*), one of many proofs of the connection between the pre-Bhotian Himalayans and the Burman family. The Mou and Kambojan pronouns, the former of which have spread into the Malay peninsula, are distinct.

The Bhotian 3rd pronoun, *hho*, *hhu*, is found in several of the Himalayan vocabularies, but not in Dhimal, Bodo, Garo, Naga or Burman, the prevalent forms being Sitan and Draviroid. The Singphu *khi* is perhaps Bhotian, but as a similar particle is a common definitive (*s. g.* Kasia *ka* singular, *hi* plural) this is uncertain.

The Bhotian plural particles *nam*, *chag*, *dag* do not appear to have made much progress in India, unless the Bengali *dig* is a derivative from the last.* The postfixed definitives *po*, *mo* &c. are found in several of the Himalayan and Gangetic languages but not in the Ultraiidian. Most of the Himalayan possessives are apparently modifications of the Bhotian, but some may be Dravirian, the latter having a wide range of possessive particles. The extent to which Bhotian forms and particles have been engrafted on the Gangetic languages appears sufficiently from chap. IV., so that it is needless to pursue the subject here.

From the evidence of the pronouns it may be inferred that the Bhotian dialect intruded on a chain of Gangeto-Ultraiidian dialects which possessed the Sitan forms of the Chinese. Save in the vicinity of the southern Bhotian dialects, the Bhotian pronouns have made little progress. Even the highly Bhotian Takpa retains the Sitan-Ultraiidian 2nd pronoun and has not borrowed the Bhotian one from Lhopa. Changlo, like Bodo, Dhimal, Abor and all the proper Ultraiidian dialects, has the Sitan pronoun, and in the sub-Himalayan band the Bhotian appears not to be found to the eastward of Nipol. That the Sitan branch preceded the Bhotian even there and further to the westward, appears from Tibarkhad preserving the Sitan pronoun.

A full comparative list of the Sitan and of the allied Ultraiido-Gangetic pronouns has already been given in chap. V. sec. 11. Among

* Magar *ka-rik*. (See chap. V, sec. 11).

the correspondences there noted will be found the contracted form *a* of the 1st pron. common to Manyak, Angami Naga and Mikir; *ang*, the Gyarung postfixial form, found as a postfix in Naga and as a separate form in Bodo, Garo and Kiranti; *ngo* Takpa and Singto; *ka* Thochu, Dhimal, Lepcha, Lau (*kha*, *kau*, *ku*), Toung Iho, &c. Most of the Ultraindo-Gangetic forms of the 2d pron. are Sitan, nan, na. The Manyak variation of the vowel *o* to *o* is found in Daphla, Abor, Deoria Chutia, Angami, Mozoom Angami and Namisa-gya. The other Sitan particles are also Gangeto-Ultraindian. I add a few examples.

The Gyarung particles occur in Ultraindian languages. *Ma*, *m* &c. is common as a negative and caritive postfix or prefix (Abor, Dophla, Dhimal, Mikir, Garo, Burman &c.). The Khamti *ma*-, *mo*-, and Chinese preposed *m* &c. is the same particle. *Da* denotes the present in Abor as in Gyarung, and a Gyarung-like combination of it with *la*, another form of the same Bhotian definitive, renders it emphatic, *lada*. In another form, *ta*, it is copulative, corresponding with the Gyarung *ta*, past. In the Daphla perfect *pana* a combination occurs similar to the Gyarung, *pa* by itself being future in Abor (in Dophla *bo*). Changlo has *-le* present, *-ba* past (Burm. *byi*, Bodo *bai*), *-dang* future (Burm. *tho*, Khamti *ta*—). Bodo has *-dang* present (used as a verb sub.), *bai*, *nai*, imperfect, *dang-man* perfect, *nise*, *gen*, fut. Dhimal has *hi* past, *khi*, *mhi*, *nhi* present. Garo has *-na*, *-enga* present, *enga-chim* imperf., *-a*, *-aa* perf., *-chim* perf. def., *esa*, *kheng*, fut (Bodo). Naga has *-t* perfect, *la*-prefixed, with *-t* postfixed, as a second perfect (Abor, Gyarung, so in Tibetan &c. pref. with *-s* postf.), *i* is future. Mikir has *-loh* past (Naga, Kas.), *-ye* future (*i* Naga), *-bo*, *-bang* emphatic futures (Abor, Daphla, so Burm *mi*), *-si* participial (Gyarung). Garo has *-na* present (Gyarung *na*). Kasia has *la*-past (Mikir, Naga, &c.), *n*-future. In Singpho *-ha* is past (Dhim. *-hi*, Bhot. *-s* also *ha*-, *h*-*ha-dai* perfect, *-a* future (Bhot. *-a*).

Takpa being at present the only known language that appears to be contemporaneous with the proper Tibetan dialects on the one side and with the Ultraindo-Gangetic on the other, it will be useful to advert to the affinities of its pronouns and particles. I add the numerals to give greater breadth to the comparison.

As Takpa is the language of the Towang raj, it must be contemporaneous with some of the dialects of the Bor and Abor tribes*. At present we are only partially acquainted with those of the southern Aka, Daphla and Abor-Miri. The two first appear to be the same and to be closely akin to the last. How far they are spoken to the north, and whether any other dialects exist between them and the Takpa, is not known.

* Are the Tag *ab* or Tag-*ab*, one of the tribes of Bhutan who inhabit the district of Tog-na, or Tag na, Tagana or Doka, not a section of the Tak-pa who happen to be under the dominion of the Deb Raja? (As. Res. XV, 146, 140 Pemberton 111). The Pilo of Tag-na's territory "lies between Baksha and Cherang. He has two Dwaras or passes, and the Refu Jadu and two Tomas are under his orders. His territory is eight days journey long and four days from east to west. He pays altogether annually in two instalments about 3000 rupees and rules about 3-16ths of the country" (As. R. XV, 139).

The pronouns of all these dialects are Sifan-Ultraindian. The 1st is *nga*, *nye*, in Takpa, the vowel being exceptional. The East Mishmi *ke* appears to be a variation of it. Daphla and Abor have *ngo*, the Chinese form,—the Sifan and Bhotian being *nga*. Mishmi has *ha*, the Manyak, Naga and Mikir *a*. The 2d has the Chinese form also found in Horpa (*ni*), but contracted to *i*. Daphla and Abor have *no*—the Manyak form—and it is also possessed slightly modified by the Western Mishmi, *nye*. The 3d in Takpa is *pe*, *ba*, which is not Sifan but Chinese and eastern Mishmi, *we*. The labial is also Daphla *ma*, and Abor *bu*. The Wgabeso Mishmi combines it with the dental *ma*. The Takpa *pl* postfix is *-ra*, the Daphla *lu* (a var. of the same particle); the Abor *lu* or *lu-ke* (comp. Horpa *ri-gi*); *a-rang* is another Abor form, and the Mishmi *long* corresponds with it. E. Mishmi has *thal* (comp. Singpho *theng*, Angami *toleli*, Tengsa *khala*) &c. The Takpa poss. is *-ka*, the Daphla and Abor *-g*. The Takpa dative is *ga*, *la*, the Manyak *we*. Daphla has *-bo*, Abor *-na-pe* or *-ke-pe* following the poss. (*-g-ke-pe*), *bo* and *pe* being the same as the Manyak *we*, and *na* the Takpa *la*, Horpa *da*, Bhotian *na*, *la*, *da*, *ra*. The Takpa ablative "from", is *li*, which may be a contraction of the Manyak *ni* Chit-pose *li*. Bhotian *na di-ne*. Daphla has *-g-ga-m*, Abor *-g-ke-m*, or *-g-lo-ke-m* (*-g* poss., *-lo* locative), in which *ga*, *ke* are Horpa, *gha*, Thochu, *ge*, *k*. Changlo *gai*, Burman *ga*. Gyar *-ni-kho*. The instrumental is in Takpa and Gyarung *gi*, Bhotian *gi-s*, Abor *-ka-hi* in Daphla *-mo-na* (following the poss. *-g-*), comp. Burwar *mi*, Limbu *na*, Lepcha *nan*, Burman *nheg*.

The numerals present some coincidences. The 1 of Abor *a-ko* may be the Manyak *ta-hi* and Thochu *a-ri* (not Takpa *thi*, or Gyarung *ka-hi*), but as *a-* is a prefix and *-ko* a postfix in the other numerals, the root appears to have been lost in 1, although it is preserved in 5 *a keng ko*, and in the adjacent Changlo dialect of Lhopa, *kheng*. Daphla retains it in 1 *a ken*. 2, Daphla *a-ni*, Abor *a ni ko*, is Bhotian, Naga, Himalayan; Takpa has *nai*. 3, D. *a am*, A. *a um ko*, Takpa *sum*, Gyar *sam*. 4, D. *a p li*, A. *a p i ko* (Changlo *ph li*), T. *p li*. 5, D. *a ngo*, A. *a ngo-ko*, u. *ngo*, *pi li-ngo-ko* (4 repeated), T. *li-a ngo* (4 repeated). 6 D. *a-k-pa-le* (*a-k= a-ken* 1, *pa-le* properly 4, but here contracted from the original full form of 5 *pa-li-a-ngo*), A. *a-keng-ko* (the 4 of D.), Changlo *kheng*. 7 D. *ka-na-g*, A. *ki-nit-ko*, *ku-nid-e* (Burm. *khu-nit* in 2 *shaik*, *nhach=ug* of D.) T. *nis* (2). 8, D. *plag-nag* (4, 2), A. *pi-ni-ko* (3, 2). 9, D. *kago*, Lepcha *kyot* (nearer to the Chinese *kin*, *kien*, *kau* than the common Tibeto-Ur. *gu*, *ku* &c.), A. *ko-nang-ko* (3 Gyar, *kung-gu*). 10, D. *rang* (Karen lang 1), A. *nying-ka*. It may be inferred that Takpa has a close special connection with the Daphla and Abor, but that the period of their separation was very ancient. The southern dialects retain some archaic full forms not now found in Takpa or the Sifan languages, and they have non-Takpa traits in common with Bhotian, and with Sifan and Ultraindian dialects.

4. Numerals.

1. The Bhotian *gehig* is the original of the Murmi *ghrik*, of which the Gurung *kri* is a contraction. The Bhotian *ap chik* is found in Serpa. Lhopa has *chi*, and Newar *chhi*. The Limbu *thit* preserves the Chinese final, and the Takpa *thi* is a contraction of a similar form.

The Naga *ka-tung*, (*ka-t* in higher numbers), *ka-to*, *a-kh-et* (? *a-khet*)

are Sifan, *ka-ti* Gyarung, *ta-bi* Manyak, (*ra* Horpa, *a-ri* Thochu). The prevalent Sifan and Ultraindian vowel, it will be remarked, is not found in Gyarung, which has the current Chinese and Bhotian *i*. With the Sifan-Naga forms are to be classed the Kumi and Kumi *ka*, Khy-og *ka-t* (of *nah*, *pa-hat*), Shiada *me-na*, Bongju *ka-ka*, Kuki *ka-ka*, Nicobar *ko-hok*, Burman *ta*, *ta-ch*, *ta ik*, Karen *ta ple*, Tongblu *ta*. The Karen and Burman retain the Manyak form unaltered. The guttural Yuma variation of this is found in Changlo khung, Daphla *a-khen*, Abor *a-ko* (doubtful, 6 has *a-keng ko*), Taying Mishmi *e-khing*. The original-Chino-Tibetan final is preserved in the Naga *a-khet* unless it be a variety of the Gyarung *ka-ti* (*khe-t*). To this variety the Kiranti *ek-tai* is also referable, unless it be Arian. The Naga *ka-t* is, in like manner, the original of the Lepcha and Magar *ka-t*, Sunwar *ka*, which appears to be the prefix of *ka-t* and not a derivative from the Yuma radical *ka*.

The slender Burman forms *tit*, *te'*, may be native varieties of the broad Sifan forms, but it is more probable from the Gyarung *ti*, Takpa *thi*, that similar varieties of the Chinese *chit*, *it*, *che* &c. were at one time current in Sifan also. The Naga *cha*, is an a form retaining the Chinese consonant. The Garo and Deoria Chotia *sha* is a variation of *cha*. Naga has also the (*van-the*), corresponding with the Burman *te'* and Chinese *che'* or *chek*. The Bodo *che* (*man-che*, in which the pref *man* is the same as the Naga *van*), Dhimal *e* (*e-long*, in 10 *te-long*), is the same variety. It is also found in the Miri *a-te-ro*. The Limbu *thit* is referable to the Burman *tit*, and the Takpa *thi* is a contraction of a similar form. The Singpho *si-ma*, and Chepang *ya-zho* appear to be Sifan (*a-ri* Thochu, *ra* Horpa).

2. The forms of Bhotian, *nyis*, *nyi*, so closely resemble the Gyarung *ka-ne*, *ki-nia*, that the affinities of the Himalayan varieties are somewhat uncertain. The Serpa and Lhopa *nyi* and Changlo *nyik* are the only undoubted Bhotian forms.

The Sifan broad form (Thochu *nga-ri*, Manyak *na-bi*) is found in Takpa *na-i*, in Kachari Bodo *na-i*, in Burman *nha-ik*, *nha-ch*, and in Naga *a-na*, *a-na-t*, the Ultraindian forms with final *i*, *ch*, *k* being referable to Sifan varieties which possessed a final consonant like Bhotian and Gyarung.

The common Ultraindian forms have *i*, *e*. Burman *nhi-t*, Nicobar *ne-t*, Kuki *ni-ka*, Naga *va-nyi*, *a-nyi*, *ih*, *a-ne*, Thongtha *ne*, Kumi *ni*, Abor *a-ni*, *a-ni-ko*, Mikir *hi-ni*, Mishmi *ka-ning*, *ka-ying* (final *ng* as in *l*), Garo *gi-ning*, *a-ning*, Bodo *man-ne*, Dhimal *ne-long*. The variation of *i* to *e* is also Horpa, *nge*, and Gyarung, *ka-ne-s*. The final is preserved in the Naga 7, *i-ngi-t*, *ni-th*, *ta-ne-t* (Gyarung *ka-ne-s*), *a-na-th*. The Singpho *n-khong* is a variation of the Naga *a-ni-ko*, and the Sibsagor Miri *n-go-ye* is a similar form with a superadded postfix found in higher numbers, *a-pi-e* 4, &c.

The Lepcha and Limbu *nye-t*, *nye-t-sh* have the Bhotian *y* augment; but the vowel is Sifan-Ultraindian. The Marmi *gni*, Sunwar *ni-shi*, Magar *ni* may be Bhotian, but Sifan-Ultraindian has similar forms, and the general affinities of the Nipal dialects are S.-U. more than Bhotian.

3. The Limbu, Kiranti, Takpa and Chepang forms in *u*, with the Marmi in *o* (*sum*, *syum*, *som*) appear to be Bhotian, like the Serpa and Lhopa. The Newar *son*, Gurung and Magar *song*, Taying Mishmi *ka-chong*, Moz Ang. *su* (Horpa), Burman *sung*, *song*, Dhimal *sum*, Singpho *ma-sum*, Bongju *tum-ka*, Kuki *tum-ka*, Khyeng *thum*, *ps-*

thang. Komi tum, Kami ka-tum, Mro ahun, Tunglha thung, Ahor-Miri a-um-ko, a-om-ko, ang-on, a-om-a, have also the Bhotian vowel, but as so wide a diffusion in Ultralandia of the Bhotian form of the numeral would be exceptional, and as Harpa has also u (ao), it is probable that u, o forms at one time existed in Eastern Tibet also, and were thence transmitted to the Burman branch of the Ultralando-Gangetic family. It is probable that the i of Thochu and Manyak has been substituted for an archaic u, (Bhotian and Harpa), because the interposed Gyarung has adopted or retained the current Chinese form sam, and the i form has made little progress in Ultralandia. The change is similar to that of broi, snake, to bri. The Gyarung must have had the proper Chinese form when its glossary was carried to Ultralandia. The Nipal terms in um, om, may be of Ultralindian and not of Bhotian derivation.

The Chinese vowel a is retained in Gyarung ka-sam, and in the Ultralind-Gangetic Mijho Mishmi ka-cham, Mikir ka-cham, Garo gi-cham, Naga a sam, a-zam, van-ran, Kachari Bodo tham, Dophla a-am, Changlo and Lepcha sam and Sunwar sang.

The Thochu and Manyak slender variety *k shi ri*, *ai-bi* is only represented to the south by the Sak *thi*, but the coincidence appears to be accidental as the other Sak numerals have no special agreement with Manyak.

4. The Bhotian *bshi*, *zhi* is Serpa and Lhopa.

All the other Himalayan terms and all or nearly all the Ultralindian have the Sifan form, Gyarung ka-di, *p-li*, Manyak *re-bi*, Harpa *bla*, *le*. The form *pli* is remarkable. It is only found in the Gyarung *ka ph-si* 40, where it appears as a root with the ordinary Gyarung prefix *ka*. *Ka-di*, 4, is the true Gyarung form, and *pli* must have been borrowed from a Sifan dialect in which *p* and not *k* was the prefix. The archaic prevalence of such a dialect is supported by the currency of the labial, 1st as the qualitative postfix in Bhotian (*po*, *bo*, *mo*).—2d, as the numeral postfix in Manyak *-bi*,—3d, as a prefix in the Bhotian 4. 7. 8 and 10 and in Bhotian verbs,—and by the prefixal position of the qualitative def. in Harpa (*ka*, *ga* &c.) and Manyak (*de*, *da* &c.), and of the qualitative and numeral def. in Gyarung (*ka*). The labial is one of the archaic attributive definitives of the Tibetan formation (qualitative, numeral, assertive), and the regular archaic position of such definitives was prefixal. The dialect from which Gyarung borrowed *pli*, must have been a very influential one, as a similar form has been widely dispersed on the southern side of the mountains. It appears to be now represented by Takpa in which *p-li* is 4, and in which it is explained as the Bhotian prefix (*b*.) joined to the Sifan liquid form of the root, *di*, *thi*, *re*. Takpa *ph*, Ahor *a pr-ko*, Taying Mishmi *ka-prei* (as in the Gyarung 8), Mijho Mishmi *b ri a di*, Garo *bri* Bodo *bee*, Dophla *a ph*, Mikir *phi*, Sin *pho me*, Naga *bel*, *pi*, *pha*, *a-b*, Kam *ma*, Sak *pri*, Changlo *ph*, Chopang *pho zho*, Lepcha *phai*, Mirmi, *bi*, Magar *buh*, Newar *ph*, Gurung *ph*. The Nagaung Naga *pa-z* is an example of a similar form in which the root has the broad form of Thochu *zha*, Angami N. *da*, &c.

The Manyak variety *re* is Moz. Naga *deh* (comp. Gyar. *di*), Burman and Sunwar *le*. It is also found with the prefix in the Naga *phale*, Bodo *bre* 4, Gurung and Mirmi *pre* 8, Kachari *re-ya* 8. These forms are examples of the operation of a similar phonetic tendency.

The *a* form of Thochu, *g-zha re* 4, *ka ra re* 8, and Harpa, *he*, is not

found to the sou h, save in Ang. Naga da, and a few forms for 8,—Singpho ma tsat, Bodo jat, Dophla pla-gang, Kasia prah.

There is no southern dialect in which *p* is found regularly prefixed to the other numeral roots as well as to 4 and 8. It is probable therefore that it was not carried across the Himalayas by a dialect like Manyak in which it was current as the regular numeral prefix, but by one in which it had become restricted to 4, &c., or which had borrowed it from a system in which it was regularly used. Shendu has *me* as its prefix throughout, but as 4 is *me pu'*, *pu* must have been received by it as a concrete vocable or root, in like manner as Gyarung received the *pli* of *ka-ph*. So also Bodo has *mān* throughout, and 4 is *mān-h-re*. But in Singpho and some of the Naga dialects the use of the labial in 4 corresponds with its use in several of the other numerals,—3 *masum*, 4 *meli* (40 *mli-si*), 5 *manga*, 8 *maisat*. The change of the vowel in 4, is explained by an assimilation to that of the root. In the Kam mah, Naga phale, Lepcha phah, the primary vowel of the prefix remains.

The west Himalayan (Nipal) forms are evidently of Ultraiidian—chiefly Naga—derivation.

5. The Bhotian and Manyak forms are the same, *ngo*, *nga*, and Gyarung is only distinguished from them by the vowel, *o*, which is Chinese. The *a* form is the most common in the Himalayas and it prevails almost exclusively in Ultraiidia. In general it is probably of Sitan (Manyak) and not of Bhotian derivation. The Chinese and Gyarung *ngo* is found in Lepcha *pha-ngu* and Sunwar *ngo*. It was probably a North Ultraiidian form also before it spread to Nipal. It has now been found in Taying Mishmi *ma ngu*.

The Takpa language repeats the root for 4, as a prefix to that for 5, and the same usage is found in Miji *pī li ngo-lo*, Bongju *rai nga-kar* and Mijhu Mishmi *ka lei* (with the root for 5 elided). These terms appear to explain the Kambujan *p-ra-m*, Anam *la m*, *sa-m*, Nancowry *la-m 5*.

6. The Bhotian and Sitan forms are similar. Bhotian has *a*, Gyarung and Horpa *o*. But Manyak has *u* and Takpa *o*. The Bhotian *thu*, *dhu*, *tuk*, is probably the original of the Marmi *dyu*, Newar *khu*, and Changlo *khun*. See App.

The Bhotian *wr. druk* is similar to the Manyak *tro-bi*. This variety and another with the *k*-prefix appear to have been the originals of the common southern variety. Takpa *kro* (Gyarung *kutok*, Thochu *khai-ro*) Singpo *kro*, Garo *krok*, Taying Mishmi *tha-ro*, Mikir *thorok*, Naga *tarek*, *thelok*, *arek*, *iruk*, *soru*, Barmen *khrauk*, *khyauk*, Sak *khyouk*, Kumi *toru*, Kami *tau*, Shendu *me-churo*, Kuki *ruka*, Tunglha *ther*, Chepeng *kuk-aho*, Lepcha *tarek*, Sunwar *ruk*. The *a* form of Thochu *kha-ta-re* is not found in the south. The Barmen amplified *kh-rank* is the original of the Mon *ka-rao*, Ka *tau*, Khyeng *chauk*, Anam *sau'*. The form that has intruded into the Vindyan system *turn*, *tur* and been received by it as a root to which a native poss. and qual. definitive has been postfixed (*turn-sa*, *tur sa*, *turn-i* &c.), resembles the Bhotian *d-ruk*, Takpa *k-ra*, Mikir *thorok*, Angami Naga *soru*, Shindu *churo*. The Gond *sa-rong* resembles the Naga *tarek*, *soru*. The Mijhu Mishmi *ka-tham* is the Gyarung 3, *ka-sam* (i. e. 3 dual).

7. The exceptional Bhotian *b-dun*, *dun* is only found in Serpa *dynn*, Lhopa *dun* and Changlo *zum*.

The Gyarung quinary *ku-sh-aco*, Horpa *z-ne* (2 for 5, 2) are the Tibetan

representatives of the prevalent Ultraindo-Gangetic term. The Gyarung prefix occurs in Abor-Miri and Burman *ku nit* &c. The Tibetan *sh*, *s* is found in Singpho, Garo, Karon &c. The curt Horpa *zue* resembles the Bodo and Garo *sni*, Bongju *sre*, Kuki *sri*. The Naga and Yuma *tant*, *thanyet*, *zanet*, *avath*, *sarika*, *sari*, Burman *kunak*, &c. appear to be connected with the Mishu Mishmi *nun* (*ning* in 2), Abor *ko-nange*, Daphla *ka nag*, Chepang *cha-na-zho*, Sunwar *cha ni*.

8. The Bhotian *brgyud* is not found to the south. The sp. form *gye* is Serpa and Lhopa. The Gangeto-Ultraindian forms generally are Sifan. (See 4).

The west Himalayan terms are of eastern derivation. Chepang *prap zho*, Daphla *plag-nag*. (Thochu *kha-re*, 8, *gza-re*, 4, Horpa *hla* 4); Lepcha *kakeu*,—Kam *kava*; Kiranti *repa*, Moron, Gurung *pre*,—*bre*, 4, Bodo, *phale* 4 Naga, (*rebi* 4 Manyak, *leshq* 40 Horpa) *pre* 2 Miri.

The Gyarung *or-yet* has an exceptional prefix, but it is found in Ultraindia as a variation of *t*, *s*. Miri has it in 8 *ri-yat* and 7 *ra-nhu*. Taying Mishmi has *el-yem*.

9. The Bhotian and Sifan terms are the same. The Lepcha *ka-kyot*, Chepang *taku*, resemble the Takpa *du gu*, Daphla *kayo*, Taying Mishmi *konyong*, Naga *taku*, Kuki *koka*, Tunghlu *kut*.

10. The Bhotian broad form *behu*, *chuh* is found in Gyarung and Tibarkad only.

The Bhotian varieties of the Chino-Tibetan numerals have therefore made as little progress as the pronouns. They are hardly found beyond the southern Bhotian dialects,—Serpa and Lhopa—save in the Bhoti-Sifan forms of Takpa. But there are a few examples of a very archaic existence of Bhotian forms in Sifan-Ultraindian systems or of a special connection between such systems and Bhotian in one of its older stages. The Bhotian labial numeral prefix appears at some remote period to have been used in Sifan and Ultraindian dialects. In some it is now more regularly used than in Bhotian.

The Ultraindo-Gangetic varieties are either current Sifan, or are connected in such a mode with the Sifan as to show that they must have been derived from systems that once existed in Eastern Tibet, although they are now represented only by remnants that have been adopted into the surviving systems. The most prevalent Ultraindian systems appear to have been the Naga—Yuma which spread westward along the sub-Himalayan to Nepal.

5. *Miscellaneous vocabularies.*

The ethnic place and influence of the Tibetan glossaries can only be properly shown by means of general comparative tables of all the known forms of South-East Asian roots. These tables must embrace, 1st, the Chinese, 2d, the Szythic, with the allied N. E. Asian, Caucasian, Indo-European, Semito-African and Malagaso-Polynesian forms, 3d, the Dravidian and Dravido-Afonesian, 4th, the Tibeto-Ultraindian and derivative Himalyo-Afonesian, and, 5th, the Mon-Anam and derivative Himalyo-Afonesian. The comparative vocabularies of this kind which I have compiled are not yet complete enough for publication; and, for the present, I must refer the reader to the appended vocabularies, although, from the time that has passed since they were prepared, they are, to a large extent, out of date. I shall here examine some groups of roots with more exactness and fullness. The general result of the comparisons I have hitherto been able to make, may first be briefly stated.

The various forms and applications of almost any single root, and the manner in which they are now found dispersed amongst the Tibeto-Ultraindian and Mon-Anam vocabularies, justify the following inferences.

1st. The Himalaic glossaries have an archaic radical connection with the Chinese.

2d. They have both an archaic radical and an intimate secondary connection with the Szythic glossaries. Not only the root, but various forms and applications of it, are often common to the two provinces. Of these Szythic forms some have been retained in Tibet, while others are now obsolete there, but current in Gangeto-Ultraindian vocabularies. The Tibeto-Burman and Mon-Anam glossaries possess many of the normal variations to which roots are liable in Szythic, from the change of the vowel; from the assumption or discarding of a final consonant, mutatis mutandis, a dental, a labial or guttural to a liquid; and from the presence or absence of a servile derivative. In the ancient Bhotian and the allied southern forms, and in the less crystallized Mon-Anam forms, the Szythic consonantal finals are found much more frequently than in Chinese. Even the ancient Chinese forms are frequently less consonantal than the Mon-Anam, the Szythic and many of the ancient Bhotian. The influence of the two can easily dated Chinese is strongly marked in all the Tibeto-Ultraindian phonologies, including the broadest and most consonantal.

3d. There are special Ugro-Turkish and Turkish affinities.

4th. Various forms of the roots must have been carried by different routes and migrations, and by different tribes, from Tibet across the Himalayas.

5th. From the variety of these sub-Himalayan forms, the mode of their distribution, and the preservation of several that have been lost in Tibet, it is certain that the Tibetan migrations to the southward commenced at a very remote period.

6th. In the Gangeto-Ultraindian province these forms were further dispersed and modified; and distinct areas of diffusion are recognizable.

7th. It is probable that from each of the southern ethnic districts of Tibet, migrations have taken place in different ages, and that the limits and mutual relations of the tribes have varied. At present the tribes in contact with the sub-Himalayans, and possessing all the known passes, are the Bhotias and the Takpas.

The Bhotias are continuous with the Gangetic tribes of the Himalayas, from the Tiberkhad to the Mishmi. The Takpa appear to march with the Daphla and Abor. They are succeeded again by the Bhotias of Kham, who possess the passes at the head of the Assam valley, descend as traders into the Mishmi country, and probably march with the eastern Abors. The Bhotian dialect appears to march on the N. E. with the Mongolian Sokpa, which, on the south, is separated by the Amdoan dialect of Bhotian from the Thochu. To the south of the last, the Gyarung appears to march with Bhotian throughout the rest of its eastern limit. On the western half of the northern boundary, Bhotian is succeeded by the Horpa, which has Bhotian on the south, Mongolian on the east, and Turkish on the north-west. It is thus, like Sokpa, widely separated from the south Himalayan dialects, but there are numerous scattered Horpas as well as Sokpas in Tibet proper.

The Thochu appears to have the Bhotian on its north and west, Gyarung on its south, and Chinese on its east.

Gyarung has on the N., Thochu,—W., Bhotian,—S., Manyak,—and E., Chinese. Whether it approaches any of the passes of the Irawady basin does not appear. It probably embraces a portion of the basin of the Me-nam and Yang-tse-kiang, and marches with the other dialects of south western Sze-chuen. The Manyak is probably interposed between it and the northern dialects of the Burman and Lau families.

The Manyak appears to lie to the southward of the line formed by southern Gyarung, Khampe Bhotian and Takpa. It is probably therefore placed on the Irawady passes, and may be in contact with some of the undescribed dialects to the north of the Singpho. On the east and south the Manyak are probably continuous with some of the tribes of S. W. Sze-chuen, and N. Yun-nan, if indeed they are not themselves the Mong-fan of Sze-chuen.

From this distribution of the Tibetan dialects we should infer that the position of the Bhotian vocabularies would enable them to affect the whole line of the Gangetic ones,—that the influence of the Takpa would be confined to the Abor group,—and that the Manyak and perhaps the Gyarung might affect the Irawady vocabularies.

We find, however, that many of the vocables that are distinctly Bhotian, i. e. both in form and meaning, have a very limited range, by no means commensurate with the present influential position of the dialect, and irreconcilable with an exclusive possession, for any long period, of such a position.

Many of the most widely diffused Ultraindo-Gangetic roots and forms are common to Bhotian with Sifan vocabularies. Others are exclusively Bhotian, and others again are exclusively Sifan. The broad and frequently consonantal forms prevailed in Tibet when the southern migrations commenced, for they are the most common in the southern vocabularies. These archaic forms are frequently still retained in Bhotian, where the Sifan forms have become slender or vocalised. Manyak sometimes retains broad vowels where they have been lost in the other Sifan vocabularies and especially in Gyarung. The Sifan vocabularies have some non-Bhotian roots and forms in common with Men-Amam, as might have been anticipated from the northern origin of the latter formation. The slender and attenuated forms of the Sifan vocabularies, and particularly of Gyarung, have spread to the south at a comparatively late period.

There have been two well marked periods of Sifan and Bhotian influence in the south. The first was when the southern migrations commenced, and when the Sifan forms of common roots were probably the same as the Bhotian. It is difficult therefore to ascertain what common roots of this period are to be considered as of Bhotian or of Sifan origin exclusively. The prefixes afford some clue. The second period is a very modern one. The Bhotian forms referable to it are in general confined to the southern Bhotian dialects, to the adjacent Nipal dialects, and to Takpa, but they are also partially found in more southern dialects. The spread of the later or slender Gyarung forms to the southward indicates a distinct movement from the archaic Tibetan and the modern Bhotian migrations.

The Chinese influence on the Tibeto-Ultraiidian dialects has been of the highest importance, and very complex. There is a radical community of roots. Chinese has at later periods given numerous vocables to all the Tibeto-Ultraiidian vocabularies, and many of these have been carried to the southward. Chinese has also directly influenced all the southern phonologies and vocabularies, Mon-Anam, Naga-Manipurian, Karen and Burman. From these, and especially from Naga-Manipurian, Chinese roots and particles have been carried westward to the Nipal and Mlechhanang vocabularies.

The Gyarung is closely and immediately connected with the latest of the dominant North Ultraiidian families, the Burmanic. As this family extends from the Singpho and Jili in the north of the Irawadi basin to Burman in the south, it is probable that it arose from an extension of the Gyarung to the south, but it also appears to have had a common basis with the older Ultraiidian dialects. The Aboer dialects appear to be partly embraced in this system, and it has influenced the Nipal vocabularies.

The Naga-Manipurian branch appears to be older than the Burmanic, and to be specially connected with Gyarung in its older or less emaculated form, and with Takpa. But as it has archaic affinities with Thochu, Horpa and Bhotian, it is probable that several Tibetan dialects have marched with the Gangeto-Ultraiidian, and, during a long course of time, successively or simultaneously disseminated their vocables to the southward. The Mon-Anam affinities of the Naga-Manipurian vocabularies greatly strengthen the inference that their connection with Ultraiidia is very archaic.

The Himalaic glossary is, in great measure, primitive and homogeneous. The dialectic modifications of the same roots are so various and so well marked, as to show that the group has retained its independence and segregation from the very commencement of glossarial development, and that distinct dialects were formed during that era. So far as other vocabularies are radically connected with the Himalaic, the connection is mainly to be ascribed to their having been primitively branches of the same stem,—dialects of the same mother-tongue. The Himalaic branch has remained more homogeneous and more faithful to the primary phase of the common glossary, because the location of the tribes who have preserved it, has given them a high degree of exemption from foreign domination and influence. The glossary is less mixed than that of most of the other linguistic families, while it has radical affinities with all of them. The Caucasian group occupies a similar sequestered position, and it is radically related to the Scythic, Semitic, African, Indo-European and Dravidian-Australian, in the same mode as the still more primitive Himalaic is related not only to it and to these, but to the Mon-Anam group and to the Chinese.

The Himalaic glossary has spread to the southward over all Ultraindia, much of India, and most of Asonesia. Whether the Ugro-Caucasian and other cognate glossaries spread from the Himalaic province, or the Himalaic were derived, with them, from some other primitive seat, is a question that does not admit of so ready an answer. But from the pronouns and particles, it is probable that the ultimate basis of the Himalaic glossary was a Chinese dialect, and that the great mass of the substantive vocabulary was introduced from the primary Scythic province. The Dravido-Australian glossary appears to have been also formed at a period long preceding the spread of the Himalaic glossary in its present form to the southward of the mountains, by the engraftment of a Scythic form and glossary on a Himalaic basis.

NAMES OF ATTRIBUTES.

Mr. Brown's vocabularies contain substantives only, so that the Manipuri dialects are not included in this comparison. The omission is unfortunate, as, next to the definitives and pronouns, attributive words (qualitives and assertives) are the most stable.

The relations shown by the distribution of the names for the colours and their various applications, are, for the most part, archaic. In Tibet various forms and applications appear to have arisen in an early period of the history of the formation. Both the primary full forms and the secondary contracted ones, are found in the Gangeto-Ultraindian vocabularies.

For example, the most important of the Tibetan roots for *black* is the liquid. In the existing Tibetan vocabularies it has several forms and applications. The full archaic form was probably *nag*, *nak*, *lag*, *lak*, *rag*, *rak* &c. It retains such a form in the words for *black* and *crow* in Bhottian and Gyarung, and in several of the Irawady and Gangetic vocabularies. It takes the dent l or guttural prefix in Gyarung and several of the southern dialects. A form with the labial prefix is also very archaic. It is found in the word for the *crow* in Bhottian and Gyarung, and contractions of it are current in Bhottian words for *blue* and *red*, in Gyarung and southern words for *night*, and in Naga words for the *crow*. These applications show that the root must have been at one time current with the labial prefix in Tibet, in its primary meaning, *black*, *dark*. The Bhottian *mo-n*, *wo-n* *blue*, Murmi *mo-n* *night*, Gyarung *mo-r* *night*, even render it probable that the form *mo-nag*, *mo-rak* &c. had acquired the contracted form *mo-n*, *mo-r*, before it ceased to be used with its primary meaning. It is not probable that the same dialect would have both the full and contracted forms current as *black*. The formation and preservation of distinct varieties of the same root, and the restriction of each to a specific use, are mainly effects of the existence of dialects. The application of other varieties to *red* must be explained in the same way. The Bhottian *ma-r*, Gyarung *ve-r*, were probably derived from a dialect in which the labial pref. was *ma-* and not *mo-*. The form of the root in the more common word for *red*, *ngi*, *ni*, shows that it originated in a dialect in which *nak*, *black*, had taken the slender form, *nyak* or *nyik*. This attenuation of the archaic forms distinguishes the later from the older Tibetan phonology. It is a Sifan and Horpa trait. The contracted form *ni*, with its application to *red*, must therefore be comparatively modern, *red* must have been known by other terms or forms in the earlier ages of the formation. Horpa and Thochu having the slender form of *nak*, with its primary meaning *black*, the

source of the secondary word *ngi, ni, red*, is manifest. As Thochu has a distinct vowel, it probably spread from Horpa to Gyarung and Manyak. It has not been received by Bhotian; and Gya *ung*, in adopting it, has retained also the older word (*ka-er-ni*). The *ni, ling, ri, nya*, of Burman, Angami, &c. show that it has spread to the south.

Black.

nag-po Bh. w., *nak-po* Bh. s., and *Takpa, nya-nya* Horpa, *nyik* Thochu, *ka-nak* Gyarung, *da-ua* Manyak.

Obs. The Gyarung form is the same as the Bhotian sp. The vocalic and elliptic *nya, Horpa*, is perhaps the original of the Manyak *na*. Thochu has the amplified vowel of Horpa and *i* form, as in so many Sitan words.

In most glossarial groups the root for *black* is applied to other dark colours, *blue, green, red* &c.—to *darkness, night*, the *crow*, &c.—as that for *white* is to *light, bright, day, sky, air, sun, moon, silver* &c. The Tibetan vocabularies are too limited to enable us to trace the applications and affinities of the root for *black*. That for *blue* is not given. The roots for *green* are different. The Tibetan and Scythic roots for *black* are applied to the *crow*;—*nyag-mo* Thochu, *ak-po* Takpa, *ab-lak* Bhot. sp. (*ka-lak* Serpa), *ta-h-rok* Gyarung, *a-lok* Lepcha, *ka-tha-rak* Khoibu, (*rok black*, Milchamang), *m-long-ga* Gurung (also *black*); where *Sokpa, kal* Horpa, *kali* Manyak (*kara, black*, Turkish, *chara* Mongol, &c.) The ultimate Scythic root is probably found in the wr. Bhotian *khata*, Sunwar *khad*, Newar *ko*. In Sanskrit the root *kara* has both applications, as in Scythic.

The Tibetan roots for *night* are different, but I give them here as they are applied to *black, blue, green*, in some of the southern vocabularies.

1. *m-tshan-mo* Bh. wr., *a-shia* Thochu, *chen-mo* Bh. sp., *sen-ti* Takpa, (*-ti* as in *rok-ti head*, *nyen-ti day* &c.), Comp. *achshan* Turkish, so, *choi* Mong., *ai, sii, shig* Yeniseian. In Chinese the root is *black, tso* (also, *hak*) Quang-tung [*hi, wu Kwan-hwa*].

2. *spha* Horpa [*spa*], *shpa* Pashtu, *shab* Hind., *chshefe* Zend, *kshapa*, Sansk.]

3. *to-di* Gyarung [*tin* Turkish, *oti, at* &c. Ugrian].

4. *tong-mor* Gyarung.

5. *kwaka'* Manyak.

The root *tshan, chen*, is also used, in combination with another root, for *green, h-jang* khu Bh. wr., *jhan-gu* Bh. sp., Horpa, *zyang-ku* Thochu, *chan-gu* Takpa. The second root is *green* and *blue* in Scythic, *kha-kho* Sokpa, *ko-ko, ku-ku* Mong., Tungusian, *ko-k, ku-k* Turkish. The Tibetan *tshan, sen, zyang* &c. is used in Chinese for *green* with the same form *sang, tsing*.

The common Tibetan root for *black* is not, in the *u-g, l-k* form. Chinese. It belongs to the archaic Scytho-Tibetan glossary. Scythic vocabularies have distinct roots for *black*, but *nog* is applied to *blue* and *green*; *nog-on blue, green* Tungusian, *nog-o, nog-on, nach-on green* Mongolian.

The Tibetan root is found with the same meaning in the Naga gr. *ta-nak* (Gyarung *ka-nak*), *a-nyak, nyak, nyak-*, *nak*,—B *min nak*, *net*, (Koreng, *crow, uget*).—*Bongju nik-ia*,—*Garo pe-nak*,—*Ahar yak-ar, yaka-dak*,—*Lepcha a-nok*.—*Milchamang rok, reg*, (also *blue, rak, rok*, and *green, rag*). It is both *black* and *blue* in *Jaboka nak*, *Nagang t-nak*, and *Tengsa nyang blue, nyak black, Gurung m-long-ga, Murini m-lung-ai*. Kinawari Bhotian has *naug-mo* as well as *nak-po*. *Khad* Naga has the form *luk* in *shim-pha-luk, green*.

Mak is merely a variation of nak. In Gyarung it is applied to *green*, *kar-nyak*. It is found with the meaning *black* in Taying Mishani, *mak-wa*, Limbu *ku-mak-la*, and Kiranti *maka-chak-wa*.

Both forms, nak, mak &c., enter into names for *night* (*shy-black*, *air-black* &c.), *darkness* &c. : *awang*, *darkness*, *rang-nyak* (*rang-yu light*, i. e. *shy-white*, *a-pa white*); Muthun *rang-nak*, *darkness*, *night*; Joboka *rang-nak* *darkness*; Muthun, *darkness*, *nyak*, *night*, *rang-mak*; Tablung, *darkness*, *nyak*, *night* *rang-niak*; Burman, *night*, *nyin*, *nya*.

The Tibetan *tsan*, *sha*, *chen*, *sen*, *night*, is both *night* and *black* in southern vocabularies. As *night* it is found in Naga *a-sung-di* (*sen-ti Takpa*), Limbu *ku-sen*, *sen-dik* (Takpa *sen-ti*); Newar *cha*, Kapi *zying-pha*, Koreng *n-chun*, Manipuri *a-hing*.

As *black* it is Singpho *chang*, *cham*, Bodo *ga-cham*, Mon *chang*, *ha-tsan*, *ka-chok*, Chunglo *chang-lo*.

The Karen *thai*, *than*, *su*, is not Tibetan but Chinese, *tsu*.

The Tibetan form is also applied to *green*, as in Tibetan, and to *blue* and *red*. Blue Khari *ching-si* and Namsang *a-ham*, *green*, Tengsa and Nau-gang *te-cham*, Khari *shim-pha-luk*, Samang *a-hing*, Joboka *hing*, Kiranti *chak-la*. It is applied to *red* in Kyau *a-tshen*, Khyer *sen*, Bouja *tsin*, Mon *chatur*, Samang *a-chak*, Goro *si-sak*, Bodo *ga-ja*, Mienanang *shing*. The Thakha *shu-dzi*, *red*, is probably the same root.

The Magar double *chik chi* appears to be a slender form of *chak*,—as *che*, *sen* &c. is of *tsan* &c.

The Gyarung *to-di night*, (Seythie *oti*, *tin* &c.) is the root for *black* in Angami *ke-ti*, *ke-ti*. It is probably found in *ti-ti night* in the sonant form *zi* (= *di*, Gyar.), *ti* being *sky* and *ti-so day* (*shy-white*). Tengsa *a-sung-di*, *night*.

The Gyarung *mar*, *night*, is not a common form in the Tibetan vocabulary of colours. It has the same meaning, *night*, in Murmi, *mon*. The *pan* of *rang-pan*, *night*, Namsang, is the same vocable, and it is also found in Goro *walo*, Maran *mula*, Chomung *aga-ola*, Lohappa and S. Tangkul *maya* (y for l, r), S. Tangkul *ayan*,—forms which accord with the inference deducible from those used for red, that the root is the liquid *la*, *ra*, *na* &c. identical with *na-k* &c., and that *mon*, *mar* &c. are contractions of which the primary Tibetan form was probably *ma-nag*, *ma-rag* &c. Compare *ab-lak* *eyes* &c. Bhotian has *mon-a*, *a-won*, *blue*. It is *red* in the form *mar* Bhotian, ver Gyarung, *wol*, *bala*, &c. Gungeto-Ultraindian. The primary meaning of *black*, *dark*, is necessary to explain the various applications. It also explains its use as a name for the *crow*, *walo*, *waru* Naga, *ola* Lohpa.

The Lohpa *phi-ra night*, appears to be a similar vocable.

The Manyak *kwaka' night* appears to be the same reduplicated guttural root that is applied to *blue* and *green* in Seythie. It is current for *night* in Kiranti *khakwa*. The Deoria Chutia *sa-ko-ko* and Mikir *a-ku-k* *black* (Mikir *ingting kok dark*) are the same term.

The Lohpa *nam-ma*, Magar *nam-bik*, Sunwar *na-do*, Lepcha, Jili, *sa-nap*, Sin *po sa-na night*, contain the Tibetan word for *shy nam* (Khamti *nap-sing dark*).

Nam, *shy*, may itself be identical with the Chinese *lan*, *blue*, and thus be merely one of the archaic forms of the Chino-Minnaic and Seythie liquid root for *black*.

The Magar *lik* in *nam-bik night*, is Seythic. *pit, pit-a night* Samoiedo, *pit, pig-pita* &c. *black* Ostiak (*his blue* Caucasian).

The Lau *khun night* is not Tibetan.

Red.

1. *s-muk-po* Bh. wr.
2. *mar-po* Bh. sp., *ka-ver* ni Gyarung.
3. *gi-ugi* Harja, *ka-ver* ni Gyarung, *da-ni* Manyak, *leu* Takpa.
4. *shi-dzi* Thochu.

1. The old Bhotian *muk* is not found with the meaning *red* in the southern vocabularies. Limbu has *muk-lab, blue*, and it may occur with that application in others.

2. The sp. Bhotian *mar*, Gyarung *ver*, is a common Seythic, Caucasian and Semito-African root. If the labial be radical, the vocable is rare in the south Himalaic tongues. The Marmi *bala, wala*, Guring *wel-kye*, resemble it, and they suggest that *la* &c. and *bala, mar* &c. are ultimately the same root (*ma-ra, ba-la*). See *Black*.

3. The Harja, Gyarung and Manyak *ugi, ni* and Takpa *leu* are forms of a Chino-Himalaic root common in the Ultramidian tongues. Burman *ni*, Kumi *p-ling, kan-lein*, Tounghu *ta-nyu*, Angami *m-vi, ka-me-vi*, (comp. Gyarung *ver*, prob. *ve-r*), Naga gr. *ma-lum, ma-lum-la, ta-mu-ram, ma-ram*, Kambojan *ka-rhum*, Deoria Chutia *sa-ra*, Abor *ya-hung, lu-luh*, Sunwar *la-la*, Khamti *ha-la-la-sea*, Limbu *ka-he-la, lo-pcha e-he-ar*. (Comp. Mong. *ulan red*).

The root in its broad consonantal form is *blue* in Chinese, *lan* Quangtung, *lan kwan-hwa*, whence the Karen *la, ta-la*, Limbu *be-la*. Chinese has also *lu green*.

The application of *lam* to *red* and *blue* seems to show that its primary meaning was *black, dark* &c., for the same word would hardly be transferred from *red* to *blue*, or vice versa. In the older Himalaic formation of Ultramidia—the Mon-Anam—the root retains the meaning *black, dark* &c. Siam *lao*, Alom *dam*, Khamti *nyu*, Laos *nu* (the slender Tibetan-Burman form for *red, ni, vi, ling* &c.), Siam *dam nu*, Anam *don* (*night don*), Kumi *ka-nun, Anam ma-nun*, Kasia *darkness dun*, Nicobar *black ringa-lum-t, Tounghu pa-lung*. The root is very common in the Indonesian vocabularies in various forms, applied to *black, night, dark, fog* &c. *tan, lam, lom, rang, run, ri* &c. &c.

The slender form is also *red* in the Lau family, *deng, heng, len*, forms corresponding with the Kumi *ling, lein roa*, Tounghu *lung, Lau-Anam nin, don black*, and indicating a special relationship between the Mon-Anam and the older Irawady vocabularies.

The Dravidian and North Gauric languages have the same root. The Male *mar-on, black*, is identical with the Bhotian *mar red*. The Kol *ara*, Telugu *era-pu*, and the Hindi *lai* and Bangali *ranga*, resemble Nipal forms of the Chino-Himalaic root.

Finally, it appears probable that the Tibeto-Ultramidian *muk, nang, lok, rok, lung, lung, nyik, na* &c. &c. *black, blue*,—the Chino-Ultramidian *lam, lan, lu, nan, rum, lung, ru, nun, num, dum*, &c. *blue, green, black, red*,—and the Tibeto-Ultramidian *ni, ugi, ri, nu, ling* &c. *red*, are all variations of one primary liquid root, which, in the eastern branch of the primitive glossary, early took the form *ni, lam*, and in the Tibetan the form *nu-g, la-g* &c. The Siam *ni, ugi red* (whence the Ultramidian *ni, ri*) has the slender form proper to the later Siam phonology, and the original was

probably the common Tibetan root for *black*, which has undergone variations that approximate it to *ni*, the current gradations being *nak*, *nyik*, *nya*, *na*. The *m* forms for *black*, *blue* &c. in the Irawady and Mon-Anam vocabularies are evidently eastern or Chinese, and not Tibetan, in their immediate affinities. They appear to have been communicated by the Mon-Anam to the Tibeto-Ultraindian vocabularies.

The Tibeto-Ultraindian *tshan*, *sen* &c. *black*, *night* &c. is, as we have seen, applied to *red* in Singpho and some of the Yuma dialects.

A guttural root is found in Singpho, Khyeng, Joboka *khi*, Mon *kit*, *ket*, Karen *go*, *gho*, Magar *gya-cho*.

Green.

1. *h-jang khu* Bh. wr., *ghan-ga* Bh. sp., Horpa, *zyang-ku* Thochu *chan-gu* Takpa.

2. *kar-myak* Gyarung.

3. *chu gin do* Manyak. (? *chu-gin-do* a form of 1).

1. *jang*, *chan*, *zyang* &c. is the Tibeto-Ultraindian root for *black*, *dark*, *night* &c. already examined. It is applied to *green* in Naga dialects and in Kiranti. That this was an archaic application is shown by the Chinese *tsing*, *sang*. The guttural is the Scythic root for *blue* and *green*, also current in its double Scythic form in Manyak and some of the Gangetic languages for *night*, *black*, *dark*. The double form with a slender vowel is *green* in Sunwar *gi-gi*. Miri has *ge-dak*.

2. The Gyarung *myak* is one of the forms of the Tibeto-Ultraindian *nak*, *nyak* *black*.

The southern names for *green* are derived from the roots for *black*. In the Naga group we find *ta-chain*, *a-hing* &c., Kiranti *chak-la*.

Limbu has *beh-la*, Serpa and Lhopa *nan-mo*, *nhyam-ho*, Gurung *ur-hya*, Mischamung *rag*, Khari *shim-phu-luk*,—all forms of the liquid root also used for *black* &c. Chinese has *lu green*.

A labial is common. Angami *ke-neje*, Lepcha *phung phong*, Murni *ping-ai*, Newar *wa won*, Magar *phi-phi dan-cho*.

White.

1. *d-kar-po* Bh. wr., *kar-po* sp. The Bhotian *kar* is probably a contraction of *ka-ru* (Comp. *khu-ru* Takpa).

2. *phru phru* (*ph-ru*) Horpa, *khu-ru* Takpa, *ka-prom* Gyarung (*p-rom*), *da-lu* Manyak.

3. *phyekhi* Thochu.

1. The Bhotian root, if not a contraction of *ka-ru*, is archaic Scythic,—*kyr* Samoiède, *gil-taldi* Tungusian.

It is applied to *star* in Bhotian, *s kar-ma*, *kar-ma*, (Abor *ta-kar*), Horpa *s-gre*, *Manyak kra* (Burman *kre*).

In its primary meaning *kar* is only found in the south Bhotian dialects of Serpa *kar-po* and Lhopa *ka-po* (*star ka-m*). The Murni *tara*, Gurung *tar-hya* (also *star*) are modifications of it.

2. The more prevalent Tibetan *ph-ru*, *da-lu*, *ka-p-rom*, is Mijhu *Mish-mi kam-ph-long*, Singphu *ph-rong*, Burman *ph-ru*, *p-yu*, Kumi *k-lung*, *kan-lum*, Kani *a-um*, Kyau *ag-nung*, Bongja *k-lung*, Garo *bek-hog* Mikir *ako-lak*, Dobphla *ping-lug-pa*, Lepcha *a-dum*, *a-don*. A slender form is found in Taying *Mish-mi*, *leo-wa*, Kasia *ba-lit*, and Deoria *Chutia pu-ri*.

The Mijhu, Singphu and Burman forms, *phlong*, *phrong*, *phru*, are re-

ferable to the later coarctated Horpa and Gyarung phru, prom. But the more common form in which the root does not take the labial prefix must be of older Tibetan derivation:

The root is applied to *air*, *light*, *day*, *sky*, *moon*, *star*, &c. The Tibetan forms for *air* have both the *u* and *a* vowel, as well as the slender modification *hak*, *dak*; *rhut*, *lung*, *ryn*, *avn*; *li*. The archaic final consonant is preserved in some of these forms. Similar forms are found in the southern vocabularies. The variation *nung*, *nang*, occurs in the Manipuri gr.; *lan* in Lau; and *rang*, *uang*, *lam*, *lan* &c. in several Naga-Gangetic vocabularies. The Tibetan names for the *moon* have the same root in the forms *la*, *da*, *lik*, *l'*, *lu'*, *le*, —*lik*, *le'* &c. retaining the guttural final as in *hak*, *da' air*. The *u* form is found in the Lau *lu*, Siam *duen*, *nung*, Yuma *s-du*, *lo*. Aram has *k-lung*, *b-lung*. For *star* Gyarung has *tsi-ni*; Nam-sang *sa-rik*; Mon-nong, Lau *fam*, *lau*, *dau*, *nam*. [See 4, Names of inanimate natural objects].

The Chinese *leuk*, *light* in colour, is probably the same root.

3. The Thochu *phyok* may be a softening of an archaic form of 2. *phyok* for *phrok*. But as there is nothing to justify such an opinion, it must be considered as a labial and exceptional root.

The Chinese term is the same root. Kuang-tung preserves the full form *pak*. Kwao-hwa has *pe*. It is found also in the Tungusian *hak-da*, *wag-da*. Fin has *wal-yi*, Ugrian *wai-kan* &c., but the prevalent Saythic roots are different.

In the south it is only found in the Lau family, and some of the Irawadi-Gangetic vocabularies that have most affinities with that family.

Lau *phok*, Algon *phok*, Khamti *phak*, Khyeng *buk*, Bodo *gu-phut*, Garo *bok-lang*, Naga *a-po*, Mili *kam-pa-dak*, Tamu-thu and Pwo Karen *ben*, Sema Karen *wa*, Magur *bo-cho*, Sunwar *bwi-sye*. (Naga *ting-puk shy*). From the vowel *u*, *a*, occurring throughout, all these forms appear to be referable to a single vocabulary, probably the Lau. The contracted Naga-Karen forms are the parents of the Nipal *bo*, *bwi*. The *a*, *u* vowel connects the Lau with the Thochu form and not with the Chinese.

The Lau *fam* has also a distinct root *khau*, *khong*.

The Naga *ma-sing*, *ta-mu-sing*, *ma-sing*, *heng*, *cha*, *choh*, Angami *ka-cha*, Dhimul *ja-ka*, Man *taha*, Nicobar *te-so*, *ti-so-ab*, Sunwar *sye* of *bwi-sye*. Tiberkhad *ehong*, is a root common as applied to *light*, *star*, *moon* &c.

The Thochu *chha'*, *moon*, appears to be the same root. It occurs with the same meaning in the Manipurian *ke-chung*, Mibhatmne *ga-ichang* (Tiberkhad *chang white*), Manyak *maik-chah day*, *ma*. Jili *ba ha-wan*, Singpho *tsau*, Bodo *shan*, Garo *san*, *sa-san*, Naga *sau*, Kul *singi*, Burman *a-si*, N. Tangkhul *a-sau*, Tiberkhad *ahang-ma*; *ting-mik sau* Lohoppa (*day-eye*), *shi-mit* N. Tangkhul. *Light*,—Jili has *thwe*, Singpho *ting-thoi*, Tangkhul *she*, *shea*, Kasia *ba-shai*. *Star*,—In Chinese it is applied to *star*, *sing*, *sing*, *shan Kwangt.*; *tsin*, *tsing*, is *light* (in colour) *clear* &c. *Shy* tsung tien, tien Chinese, *yi tien day*.

ONS. 1. Both broad and slender forms of the roots have been anciently current in Tibet and have received different dialectic applications. The same root has also been applied differently in different dialects. Thus *nak* or *lak* is *black* in one voc., *crase* in a second, *blue* in a third, *green* in a fourth, *darkness*, *night*, in a fifth. Shan &c. is *black* in one dialect, *night*, *dark*, *blue*, *green*, *red*, in others. Where the root has more than one application in the same dialect the different meanings are sometimes distinguished by the definitives, as well as by the form of the root. This use of the def. is generally arbitrary. It sometimes

runs through several dialects, indicating a diffusion of the term, but in other cases the same def. occurs with a special force in one dialect and without it in others. Bhotian has *nak-po black*, *ab-lak crow*; Thocha *nyag-wo crow*, *nyik black*; Gyarung has *ka-nak black* (corresponding with the Serpa form of Bhotian *ka-lak*), while for *crow* it prefixes *ka* to the Bhot. compound of the root and the labial pref. *ka-b-ro*; Gurning uses the labial form with both meanings—*ka-long-ga*. In the southern dialects the root occurs with the labial pref., and with the guttural or dental, in its primary meaning *black*, while one of the Manipuri dialects prefixes the gut. to the dental in its word for the *crow*. All this is a consequence of the present dialects having been formed when the roots were not concentered with the prefixes, and when different def. might be used for the same purpose.

2. Slender forms of the root occur in Thochu *nyik*, Burman *net*, Kora *reng nget*, Bonja *nik*, Garo *nek*, Misch. *reg. black*; Bhot. *sp. chen, night*.—Takpa, Limbu *sen black*.—Naga *gr. ching blue*, *hing green*.—Yuma *sen, tsin*, Misch. *shing red*; Horpa *ngi*, Gyar. *Msan*, Barm. *ni*, Angami *ri*, Yuma *ling*, Lau *lam, len*, deng &c. *rel*.—Lau, An. *ni, den*, Toung-thu *leng black*.—Barm. *nyin night*. The liquid root for *white* has only broad forms with that meaning in Tibet, but slender ones occur in the names for the *moon*. Deoria and Kasia have slender forms for *white*.

3. The special East Tibetan connection with the southern languages is well shown by the word for *red* in Gyarung, Manvak and Burman, *ni*; and by the word for *white* in Horpa, Gyarung, Mijhu Mishmi, Singpho and Burman, *M*, *M* preserving the double pref. of Gyarung. It also illustrates the special Gyarung and north Irawady element in Burman as distinguished from the older dialects of the same family, the Yuma forms being Takpa (which again appears to be Bhotian).

4. The Karen *thu*, thus *black* is Chinese; *ta la, la blue* is probably from the Chinese *lan*, and some of the Naga and Nipal terms appear to belong to the same relationship; *wa, hwa white* (*taka po light*) have Naga and Nigal aff.

5. The Mon-Anam family have a distinct archaic form of the liquid root for *black* and *night*. It is retained in the Yuma dialects and Kasia in a broad form; Lau and Anam have *e* forms. Slender forms are also applied to *red* in the Lau fam., and were probably communicated by it to those dialects of the Tibeto-Irawady family that first spread to the south, as these forms are found in Toung-thu and Kumi. The Lau word for *white*—similar to the Thochu—has been communicated to Khyeng, So *o* and Garo; and in Karen and some Naga and Nipal dialects it is retained in a softened form.

I add a few more words of this class for the purpose of illustrating the connection between the Himalaic and Asonesian languages, but without attempting any exact comparisons. They are roots of a class that have many applications, and several of the published vocabularies do not contain them.

Large.

TIBETAN.

1. *chhen-po* Bh. wr., *then-bo* Takpa, *ham-thu* Horpa, *ka-hti* Gyarung &c. *Long* 2. Chinese, *long*, *cheung*, *chang* &c.

2. *abum-bo* Bh. wr., *boim-bo* s. and Liopa, *pwi-tha* Thochu. Chinese *pi great*.

3. *kah kah* Manyak. † Chinese *ku*; *broad kwan kwoh*.

SOUTHERN.

1. *the-ba* Gurung, *a-ti-m* Lepcha, *a-chung* Muthun, *chong* Jobaka, *yong* Mulung, *yong-nong* Tablung, *joh* Angami, *jo-par* Moxome A., *yom-ba* Limbu, *nga jung* Murmi.

2. *ga-ba* Singpho, *ta-pe*, *te-be* Tengsa Naga, *ta-po-tiau* Khari, *jo-par* M.

Angami (jo-su long), bete Abor, (*fat. ta-bek* Tengsa, Nagaung, *ta-bit* Khari, wa Burman, phum Siangpho, also *fat* = *gu-phung* Bodo, kwi-pan Gyar., round wa' wa' Manyak.

4. *ka-tai* Mijha Mishni, *a-ta-ah* Miri, *u-to-yang* Kiraati, *tan-gô* Newar, *ga-da* Garo, *go-det* Bodo, *dham-ka* Dhimi., (*fat a-ta-t* Namsang). This root is Chinese, tai, ta, Anam dai.

5. *a-rang* Taying Mishni, long, lung, luang, Lau f., *ta-lulu* Nagaung Naga, *yong-nong* Tub ang, *a-dong* Namsang, *nan* Matham, *do* Karen, *lon* Khyeng, *Kami*, long *Kami* (also *fat*), *tha-not* Mon, (*fat, a-do* Abor, *tok*, *tup* Burm.). See Long 1, Tib. ring, Southern long, lang &c.

Round, ka-ha-lar Gyarung, *lo-lo* Horpa, *z-hum-po* Bhot. wr., *ri-ri* sp., *bi-ri* Takpa, *a-sa-ri* Thochu, *tu-rang* Nagaung, *din-din* Siangpho, *k-lom* Siam, Ahom, *k-on* Lau, *pu-luu* Kami, *pu-lu* Khyeng, *ph-lu*, *ph-lon* Karen, *lan*, long Burman, *tang-lung* Toung-thu, *ter-ter-bo* Lepcha, *ri-to* Murmi. The Serpa *gir-mo*, Sunwar *kul-kul* round, Serpa *gir-bu fat*, Burm. kri, Magar *kran*, are probably contractions of the common monosyllabic kind of forms similar to the preceding—*k-ri*, or *hi-ri*, *gi-ri*, *ku-lu*—*ku-lu*, *hi-rao* [=Gyar. *ka-lar*, Vog. *tu-rang*, Mon *fat ku-ra*].

5 a. kri, kyi Burman, *gir-bu* Serpa, *kran-cho* Magar, (round, Serpa *gir-mo*, Sunwar *kul-kul*, *fat ka-ra* Mon, *kal-ha*, *gal-ee* Horpa, *cher-wa* Thochu). Prob. 5.

5 b. Lau f. yai, yau (al o long). Prob. from lau, rau, forms of 5 used for long.

Long.

TIBETAN.

1. ring-po Bh. w., rim-lo Bh. sp., ring-bo Takpa (*zug-ring tall*).
2. *ko-chi* Horpa, *dri-thû* Thochu (ur thû Sokpa), *sha-aha* Manyak. See Large 1.

3. *ka-sri* Gyarung (also *tall*); *dri*, Thochu and *sri* Gyar. may be *s-ri*, *d-ri* (1). In like manner the Manyak *hra hra*, *tall*, may be *h-ra*.

SOUTHERN.

1. *ka-long* Taying Mishni, *ga-ha-rang* Mijha M., *ga-to* Siangpho, Bodo, *rhin-ka* Dhimal, *ta-luu*, *a-lo*, *lo*, *lau*, *lang-ke-lo*, Naga, *pu-lo* Garo, *lot-cho* Magar; *rhin* Burm., *ke-er-ke-re* Angami, *ka-lein* Mon, *lui* Deoria (Bh. you fan f. [you fan f.], *rang-ha* Murmi, *rhin-bo* Gurang, *a-rhin* Lepcha, (See Large 5. Tall 2).

2. *she* Burm., jo-su Mozome Angami. See Large 1.

Tib.

TIBETAN.

1. *thom-bo* Bh. sp.
2. *gu-khye* Horpa. Chinese ko, kau high.
3. *bra-tha* Thochu.
4. *ka-sri* Gyar., *zug-ring* Takpa, *hra hra* Many. See Long 1, Large 7.

Southern.

1. *a-tho* Lepcha, sung Lau fam. See Large 1, 4.
4. *ni-rang*, *ni-yen* Burm., *lang-la* Naga, *lian* Khyeng, *tha-lon* Mon. See Long 1, Large 5.
5. *tau* Mulung, Tablung; Chinese kau; (t for k as in tau I, thu 9 &c.) *tau-ga* Newar large.

ONS. The root in *ch, th* occurs in Tibet both with broad and slender vowels.

1. *thn large* Horp., *thom tall* Bh., *tho* Lepcha, *dri thu long* Thochu, *jo su* Moz. Ang., *a-tum round* Namsang. To this are related the Naga *large chung, chung, yong, Lanchu yon*,—*Lau tall sang*, which are still closer to the Chinese *cheung long*. Kiranti to.

2. *sha long* Many., *bra-tha tall* Thochu.

3. *ehhen large* Bh. wr., *then* Takpa, *thi* Gyar., *the* Gur., *tim* Lep.; *chi long* Horp., *she* Burm.

The liquid root has similar variations.

1. *lum, round*, Bh. w., *lom* Siam, *lo* Horpa, *lun, lu* Yuma, Burm., Kar.; *long, long*, Taying Mishmi, *lu Sing.*, *Bodo, Guro, lo, Nag*; *rung large* T. Mishmi, *lung, long* Lau f., *lu, deng, nung* Naga, *do* Karen.

2. *lar round* Gyar., *ra* Thochu, *rang* Nogaung; *rao fat* Magar, *ra Mon*; *rang long* Mijhu; *rang tall* Burm., Nag.

3. *ri round* Bh. sp., *rhi* Takpa, *din* Singpho, *rer* Lepcha, *ri* Murmi; *k-ri fat* Burm., *g-ri* Serpa; *ring long* Bh. wr., *rim* sp., *s-ri* Gyar., *d-ri* Thochu, *chin* Burm., *reng* Murmi, *chen* Lepcha, *rhim* Gurung.

Allowing for purely local changes, the distribution of these forms shows a special relation between Bhotian and Gyarung, and between both—but especially Bhotian—and the Lrawady or Burman group on the one side, and the Nipal on the other.

As some of the dental words are variations of the liquid, I will only add the labial.

1. *ham large* Bh., *phum fat* Singpho, *phung* Bodo; *bote large* Abor, *bok fat* Tengsa, Nag., *po-tsu* Angami, *po-moja* Moz., *pur large, ke-mer round*, Ang.

2. *pan fat* Gyar., *tok pan* Kiranti; *ba large* Singph.; *pan round* Ahom, *man fat* Siam, *mon round* Khamti.

3. *pi large* Chinese; *pwi* Thochu, *pe, be* Tengsa, *pe, bi* Khari, *pi fat* Lau f.

The Lau *lom round, long, lung, large*, show a Bhotian affinity, which Mishmi partakes; *yau long* is a Naga form, *lau* Tabl., *ti-lhaun* Khari, *nau large* Muthun; *sung tall, high*, is also Naga, *jo su* Moz. Ang., *chung large* Muthun; *pan round* Ahom, *man fat* Siam, *are* Gyarung; *ui fat* Lau, is Naga, *po-tsu* Ang. *a-syn-m* Lepcha, *sui-ni large* Deor. Ch.; *pi fat* is Chinese, *pi large*.

The Mon *thu-not large*, is *Jobaka fat* mt. Magar *lot-cho long*; *ha-lon long* is the common T. U. term; *thu-lon tall* is Khveng &c.; *ha-ra fat*, Magar *h-rau* &c.; *khu-tung round* is Anam ton, *Toung-thu tung-lung*, Abor, Namsang, Deoria tum.

The Kambojan *ton large* is *thu* &c. of Bhotian &c., but in the Bh. form for *tall* *thum*, Namsang &c. for *round*, *tum*; *man round* is *khan ti* (*fat* Siam *man*, Gyar. *pan*); *ri-sing long* has the T. U. *ri, ring*; *ka-pes high*, (*bote large* Abor); *tuit small* is a form of the C. H. root for *small, short*, occurring in the Naga gr. *tut* for *short*, *Jobaka tut*, *Khari tut-si*, *Nog. tat-su*; *hi-le short* is *small* in the Lau f. *lek* (Nama. *a-ring*).

The Anam *dai, large*, is Chinese (Kwang-t.) *tai*, and it has been communicated to Mijhu Mishmi, like many other Anam words; *loi thick* and *poi long* are probably connected with the Angami *sa, si* and the cognate T. U. words; *ton round* is Mon *khu-tung*, *Toung-thu tung-lung*, Nam-

sang a-tum. Deor. Ch. tumo-ru &c., Miri a-tum-dah; kan *high* is Chinese kan (Kwan-hwa); nyo *small* is Chinese lioh (K-h.), or Lau. Burm. &c.; thap *short* is Lau, tam,—an archaic form of the Chino-Tibetan twan, thung, tha &c.

The K-t. Chinese tai, *large*, has been received by Anam and Mijhu; the aff. of pi and ku are archaic; kan *high* (K-h.), Anam kan, Malung and Tablung tau. Karen tho, to, Toung-thu a-kho (K-t. hò); the close aff. of the roots for *small, little* with the T. C. appear to be all archaic; chung, cheung *long* has archaic aff.

Small.

TIBETAN.

1. chhung Bh. w.; chun-chung Bh. s., chung-do Takpa, ka-chai Gyarung, bra-tsi-tha Thochu. Chinese tsin, si, shu, siu, sui, sic.
2. pha Bh. w., pu Takpa, [bra-tsi-tha Thochu, bra-tha tal].
3. kam-ma Horpa.
3. yu Manyak.

SOUTHERN.

1. ka-ti Singpho, ka-tshi *little* Pwo Karen, te-su Tengsa Naga, sui Tablung, (tsi *short*), Mulung, ku-chu Angami (*thin* chya Burm., a-cha Namsung, a-chin Lepcha, yo-shu Limbu, t a-hi-pa Muthun, hi-Jobaku.
2. a-ring Namsung Naga, te-lala Nangong Naga, ning-haji Khari, lek, let Lau f., (*thin, kam-rhang* Horpa, ka-ri Manyak, rid-po Bhutian, nen-ma Serpa, ru-cho Magar.).
3. a-tuo-dah Miri, po Sgau Karen, pha Pwo, (phu *short*), a-hi-pa Muthun, (*thin, ma-ho* Bhutian, ta-pa Kumi, pau Khyeng a-pa Tengsa, a-po-pr Nagaung, bye ko Lhopa.
- 2 che-ka Taying Mishmi.
4. a-ngi-do Mon, (*yi dah, thin*), nge Burman, noi, ou, lek noi, Lau f. nao Khyeng, nyo Anam, lioh Chinese.

Short.

1. thung-po Bh. w., thun dong Bh. s., thung-po Takpa, ka-chan Gyarung, k-tha-tha Thochu (*max*), ga-de Horpa (*max*). Chinese tun, twan.
2. kalge Horpa.
3. wong-chi-tha Thochu.
4. dri-dra Manyak.
1. ka-tyoa Taying Mishmi, ga-thi Mijhu, ka-tum Singpho, to Burm., do Kumi, doi Kumi, twe Khyeng a-ton, ta-tsu, tut, so Naga, a-tun Lepcha, tang-ba Limbu, dung-ta Kiranti; tam Lau fun., thap An. See *Small* 1.
3. See *Small* 3.
4. See *Small* 2.

Eat.

1. zo Bh. w., Takpa, so Bh. s., ta-zo Gyarung, a-da Thochu, nga-jen Manyak (Chin. shik, shi).
- Burm. cha, sa, Singpho shau, Naga chau, tyu, cha, sa, sang, ha, chi, Mon tsai, Lepcha zo, tha, Limbu che, Kiranti eho, Murm. chon, Garung chad, Sunwar jau, Magar chau.
2. na-ngi Horpa (t ki Chin.), Lau kin cat, *drink*.

Drink.

1. k-thung Bh. w., thung s., thung Takpa, wa-thi Horpa, a-thi Thochu, nga-chid Manyak.

chu-ma Taying Mishmi, *chang-cha* Mijhu (*cha* assertive post.); Burm. sok, thauk. Aber *tu-pu*, tai-*pu*, Limbu thung-ne. Kiranti dang, Murmi thung, Newar ton, Gurung thuna, Sunwar tung, *chu* &c. *water*.

The root for *water* precedes another root in several dialects, Sansang jo-k (*jo water*), Jolaka ti-ling (*ti water*), Muthun si-ugcha, Tablung yang-ying (*yang water*), Tengsa tu-mum (*tu water*), Angami zu-kret, M. A. dzu-kret (*zu, dzu water*).

2. *ta-mot* Gyarung.

Sleep.

1. nyan Bh. w., nye s., nyet Takpa, *a-nan* Thochu.

Naga ana-*nu*, Murmi ngung, Lau fam. non, nap, lap.

2. *gur-gyan* Herpa.

Miri yum.

3. *kor-man* Gyarung (Chin. fan, min).

Mijhu mui-*chu*.

3. *khai-ya* Manyak.

4. Naga jip, jup, ipi-silo &c., Limbu ip-se, Kir. im-sa, Sunwar ip.

Come.

1. hong Bh. w., hai Thochu, s-hyon Bh. w. *ka-pun, pa-pun*, Gyarung. Sunwar pyu, Newar wa. Mijhu hai-*cha*, Taying M. hom-*na*, Lau fam. ma.

2. syo Bh. s., Takpa.

Singpho sou.

3. *kwi-lhen* Herpa, *le-ma* Manyak, (Chinese *le, loi, lora, & lya* etc.).

Burm. rok, yauk, la. Naga a-rung, u-ha-lu, Magar *ai-ai*, Kiranti *ba-na*, Lepcha di, Limbu *phe-re*.

Go.

1. song Bh. w., *ta-shin, wa-shin* Herpa, *da-chin, ya-chin* Gyarung (Ch. lu).

Burm. swa, Naga tau, tong, Miri sa, Murmi sye go, Newar hon.

2. gro, gyu Bh. w., gyo Bh. s., (*h-gro, gyo, mae, wuh*).

Kiranti ka-ra, Sunwar lau.

3. *da-kan* Thochu (also *move, walk*), gai Takpa.

Burm. k-wya, Naga kao, Limbu *he-ge*, Lau fam. ka. (a softening of *go-chin*), yu Manyak.

4. ye-yen Gyarung.

5. *bo-na* Taying Mishmi, *phai-cha* Mijhu., *poi, mon* Lau f.

NAMES OF INANIMATE NATURAL OBJECTS.

For *air, sky, day, sun, light* and *fire*, there are three principal roots in the Tibetan vocabularies, each occurring with all or most of these applications.

1st li, ni, ne, nyi, nye: lang, dung, rhod, rru, zyu; thak, da', nam, lang, nga.

2d ma, me, mi, mah, meh; mon, meun, mun; wuh, wat, hod, pho, nik, hwe, eu.

3d koh, khah.

The 1st and 2d of these roots are also applied, as we have seen, to *white, moon, star*.

	<i>Air.</i>	<i>Shy.</i>	<i>Sun.</i>	<i>Day.</i>	<i>Night.</i>
1 Bhotian	{ wr. <i>r-lung-ma</i> (sp. <i>hak-pa</i>	nam khah	nyi-ma	nyin-mo	hod
2 Horpa	<i>pu-ryu</i>	koh	nga	nye-le	sphe
3 Thochu	<i>mo-zyu</i>	mah-to	mun	styak-lo	cú
4 Gyarung	<i>ta-li</i>	<i>tu-mon</i> <i>tau-meun</i>	<i>li-ni</i>	nye	uik
5 Manyak	<i>mer-da'</i>	mah	nyi-ma	nash-chah	wuh
6 Takpa	rhot	nam-dung	<i>p-lang</i>	nyen-ti	wot

	<i>Fire.</i>	<i>Moon.</i>	<i>Star.</i>	<i>White.</i>
1 <i>sa-meh</i>	{ <i>z-la-va</i> (<i>da-wa</i>	<i>s-kar-ma</i>	<i>d-kar-pa</i>	
2 <i>u-mah</i>	<i>s-lik-uo</i>	<i>s-gre</i>	<i>phru phru</i>	
3 <i>meh</i>	<i>chha'</i>	<i>ghada</i>	<i>phyokh</i>	
4 <i>ti-mi</i>	<i>tsi-le, chi-le</i>	<i>tsi-mi</i>	<i>ka-prom</i>	
5 <i>me, ma,</i>	<i>he'</i>	<i>kra'</i>	<i>da-lu</i>	
6 <i>meh</i>	<i>le'</i>	<i>kar-ma</i>	<i>khe-ru</i>	

1. *The liquid root.**Air.*

The Gyarung *ta-li* is the Bhotian representative of the most common form in the Burman branch,—*Toung-tha ta-li*, *Lhyang ha-li*, Karen *la-li*, *Mra ra-li*, Burman *le*, &c. It is also *Aka du-ri*. This slender form is Ugro-Turkish.

The Manyak *me-r-da'* is allied; *Lat.* to the Bhotian sp. *hak-pa*. Murmi *ha-ba*, Kiaranti *hak*; *ad.* to the Naga *ra, rang* &c., Mishmi *arenka*, Gurung *nang-mro*, Milch. *lan*.

The *u* variety of Bhotian wr. *lung-ma*, Serpa *lung-bo*, is allied to the Takpa *rhot*, Horpa *pu-ryu*, Gurung *u-mo*, Thochu *mo-zyu*; the Takpa *rhot* to the Muram *nh-lut*.

A similar form of the slender variety occurs in the Chingha *rili*, and Khoibu *nong-lil*. The *-t—, -d*, is the *-k* of Bhotian, which Horpa preserves in *lik moon*.

The Lan. *fun*. has *tom, lon, Mon-b-foei* (also *k-ya= k-la*).

Shy.

The Bhotian *nam shy* appears to be an archaic variety of the root. In the *u* form it is also archaic Seythic, *nom, num, nob* Samiede, *na-ma, nomen* Egr. (*hunen lat.*) and, with other vowels, a widely spread name for *sun, god, prophet, king* &c., *nim, nom, neh*, &c. The Bhotian *nam* is found in Takpa, *nam-dung*, in combination with a *u* form of *lung, nung*. It is not found in any other non-Bhotian vocabulary save Kiaranti *nam-cha*, and Kashmiri *nab*. Applied to *day* it also occurs in the Murmi *nam-in*. As *sun* it is Limbu, Kiaranti, and, in the contracted form *na*, Sanwar. Magar has *nam khau*, which is the Bhotian *nam kha, shy*. As *sun* the root is Hungarian *nap*, (*poi lat.*)

It is found in some names for *night*, in which it must have had the meaning *shy (shy-black, shy-dark)*. Magar *nam-lak*, Lhopa *nam-sau*, Sanwar *na-do*, Lepcha and Jili *sa-nap*, Singpho *sa-na*.

The Takpa *dung* is found in the Naga *rang-tung*; in the original

form in the Tạng a-nung, Manipuri nang-than, in the Anam tung-tien (Tien Chinese); and, with the slender vowel, in the Abor ta-ling (comp. Gyarung ta-li air), Khari a-nung. In the Manipuri dialects, the Takpa and Naga dung, tung, may be the parent of the *i* forms, ting-puk, ting-er, ting-a, ting-eram, ka-zing, ka-zí-rang, ka-chi-rang, but it is more probable that these are variations of the sibilant root. The Turkish and Mongol combine a similar form of the root, teng, ten, (immediately related to the Chinese, tien) with the Ugro-Turkish *ri air* &c. (teng-ri &c.).

The *a* form is still more widely diffused, b-ra Mishni, ram, rang in the preceding Manipuri compounds and in others, rang-len, thant-wan; rang-tung Naga, no kho-rang Bodo, ta-liang, sa-rag, sa-rangi Nipal, sa-range Male.* The Mon-Anam vocabularies have p-long Chong, b-lovi Anam (air in Man).

The Bhotian variety has a very narrow range; and as the forms dung, nang &c. are found associated with zing, zi, ling, rang &c. the probability of similar *u, o*, forms having been current in the Sifun dialects as well as in the Bhotian, with the meaning *air*, is increased.

The Naga-Manipuri rang, ram, (with the *ta-, sa-* prefixes of that group) appears to have been carried along the Gangetic basin to the Bodos, Nipales and Rajmahals. It corresponds with the Bhotian Bhak *air*, la moon.

The Tibetan liquid root for *white* ru, lu appears to be the same root. In the Gyarung ram it preserves an archaic final, as in nam, ram &c. sky. The Lau lom *air* has both the *G*. vowel and final. Comp. also the southern forms for *white*, lum, dam, lung, lun, lung, rang, rang, lang, lug, lak, lih, vi. The Bhotian nam sky must be considered as a variety of rang, ram, rang. Bhak &c., *air*, sky, *white* &c., and not of the Chinese lum blue (*ante* p. 26). The Takpa nam-dung sky, is evidently the same as the Namsang rang-tung.

Sun, Day.

The same root is *sun* in Takpa p-ang, and Horpa has also the *a* form, nga (Anam ngai day). Bhotian and Manyak have the slender form nyi-mo, and it is also Gyarung *ti ni* (Comp. ta-li air). With the meaning *day* this form is Bhotian, nyi-mo, nyin-mo, nyi-mo, ni-mo, Horpa nye-le, Gyarung nye, Takpa nye-n-ti, N. Ubraindian, in all the groups,—*ti-ni, ta-ni, ta-na, ti-ni, ka-ni, ni, ne* &c.,—Dhimul and Nipal. In the last it retains the original meaning of *sun* also, Murmi di-ni, sun, day, Garing dhi-ni, sun, di-ni, day. This form is referable to the Naga ti-ni. The Ubraindian sibilant variation current in Singpho, si-ni, may be the original of the Kambojan ti-ngai (also ta-ngai). Anam has ngai day from which it may be inferred that in the Kambojan, Chong and Ka ta-ngai, the root is ngai; comp. the Horpa nga sun.

The Takpa nyen-ti day appears to be related to the Bhot. nyin, Horpa nye-le on one side, and to the Limbu hen-dik, Kiranti len on the other. Abor has longe and Manipuri ho-lan, lan-la. Kapwi ri-mik (day eye).

The Kambojan tingel, tangal, (also Ka, Chong), Mon mun tata-ngwe, Koreng ting-mi mik (day's eye), Lohruppa tsing-mik (*ib.*), Tangkal, Naga, ting-lu, sun, resemble some of the preceding forms for *sky* and *day*.

* In some dialects rang is very much used. Namsang has rang-tung sky, (Mutlum rang-han *sun*), rang-vo light, rang-nyak darkness, rang-yi day, rang-pai night, ka-tha-k-rang god (rang-ding Mutlum), rang-mok thunder, (Mutlum rang-bin air), rang-fom cloud.

Light.

In the Tibetan vocabularies the root occurs rarely with the meaning *light*. In Lhopa *nam* becomes *dām* with this meaning, the Changlo dialect preserving *ngam*. Serpa has the slender form *rhup*, Magar *rap*, Gurung *hh-la*, Kiranti *u-la-wa cha-mi*. The Lepcha *aom*, is probably a contraction of *ngam*. The Aka *hang*, Sunwar *hango*, Chepang *angha* appears to be a variation of the sibilant form, *sang*, *shang* &c. Naga has *rangai*, *rang-ro*, Burman *lang*, *len* (*day* in Limbu and Kiranti), Garo *k-lang*, Bodo *sh-rang*, *chu-rang*. Lau has *lang*, Anam *den*, *rang-sang*, Kambojan *p-lo* (comp. *m-ro* of the Gurung *hang mro sky*, Horpa *pu-ryu*; also *jin-p-ro white Gend.*).

Lepcha *a-chur light*, Limbu *thoru*, is a form similar to the Bhotian *hur wind*, and Mongolian *a-hur*, *a-chur*, *uhr air*; but it may be *a-chu-r*, (= *chu-rang* Bodo), *tho-ru*.

The Chinese word for *day* may be the same root *ngit* Choo-hu; *jit*, *jī*, *git*, *get*, *yai* in other dialects,—*sun* *ngit thioe*, *jit than*, *yat tau*, (*day's head*). Gyarai has *re-thou* (*re* for *ne*, *ni*) *sun*, *re-yai light*. Anam has for *sun* *nhit*, *ngat*, *nhut Chin*.

Fire.

The Chinese and Tibeto-Burman root for *fire* is the labial (see 2). But some of the Tibeto-Burman forms of the *l* root are found in Mon-Anam vocabularies for *fire*,—*pi-lung*, *p-lung* Kambojan, *i-leu* Chong, *lia*, *lua* Anam, *ding* Kasia. The antiquity of these vocables is attested by the root occurring in the group with other meanings, *p-lung sky* Chong, *l-loei sky* Anam, *air* Mon; *p-lo light* Kambojan; *lum*, *lom air* Lau. The Kambojan form *lung* is the Bhotian *lung air*; Takpa *dung*, Naga *nung*, *tung*, Anam *tung*, *sky*.

Moon.

The prevalent Tibetan name is the liquid root,—the vowel broad in Bhot, and slender in the other dialects. See *White* p. 29. The variations are similar to those which the root has with other meanings. Thus the Bhot. *z-la-ra moon* is similar to the *a* form for *sky sa-rag* &c., the *-k* being preserved in Horpa *s-lik*, *moon*, Bhot. *lhak air*, although lost in *la*, *da moon*.

The Bhot. *a* form is found in Anam. The Lau fam. has the *u* form, common in *white*, *air*, *sky*, *fire* &c.

In the south the broad Bhot. form is common. Aka *pa-la*, Mru *pu-la*, Mijhu *lai*, Marani *lia*, Khoibu, Maring *tang-la*, Burm., Karen, Kami *la*, Newar *mi-la*, Sunwar *la* to *si*, Chepang *la-mi*, Lepcha *la-ee*, Limbu *la-ra*, Kiranti *la di-ma*, Murmi *lia-mi*, Changlo *la-mi*, Lhopa *dau*, Gurung *lau ngi*, Khyeng *kh-lau*.

The *u*, *o*, form is found in Abor *po-lo*, *pa-lo*, Dophla *po-lo*, T. Mishmi *ha-lua*, Iho, Koreng *cha-rhu*, Toung-thu *lu*, Kami *lho*; Lau fam. *leum*, *lu* Khamti, *deun* Laos, *duen*, *duen nung* Shum, *den* Ahom.

The slender form of Gyarung, Manyak and Takpa is found in Mithum *ut-mi*, Garo *rang ret*, Tablung *le*, Khari *le-ta*, Dhimal *ta-li*, Changlo *la-mi*, Ksanti *la di-ma*, Murmi *lia-mi*.

Star.

The forms for *star* are similar to those for *white*.

2. *The Sibilant Root.**Air.*

The Thochu *ma-zyu air* appears to be merely a variation of the common Tibetan liquid root, which has the similar form *ryu* in Manyak, the change from the liquid to the sibilant occurring with other roots (see *Numerals* 4). The same phonetic change connects many of the Southern words in *s* with those in *l*, *r*, *d*, *t*. But some of them appear to be connected with the Chinese sibilant root used for *star*. For *air* words resembling the Thochu occur in Taying M. *zhung*, the Manipuri and Nipal groups—M. *ma-su*, *ma-si*, *ma-r-th* (comp. *ma-r-dah* Many.)—N. *nam-su*, *pha-se*, *sha-mi*, *sa-mi-t*, *sag-ma-t* &c. (comp. *lhak*, *hak*). It is found also in Milch. *hash* (Abor *asar*).

The Lepcha *sag-ma-t* (*day sak-ni*, *sun sa-chak*) appears to be also found in Limbu *tam-sak-pa shy*, an archaic sibilant form allied to the Limbu *sa-mi-t*. The Kiranti *hak* appears to be referable to the old Bhot. *lhak-pa*, and not to a sibilant variety. The antiquity of forms like *sak* is shown by the Turkish *sok-lu* (Yenis-Turk.). Comp. also Turk. *syod light*, or *fire*, with Bhotian *hod*, Limbu *ot*, Takpa *wot*, *light*.

Moon.

The Thochu *chha' moon*, appears to be an archaic form allied to *sak*. The Gyar. *tsi*, *chi*, of *tsi-le*, *chi-be*, is probably a slender variety. Manyak has the broad form in *nash-chah day*, *sun*. In the south the Thochu form and application are found in Manipuri, Kapwi *tha*, Singpho, Jili *si-ta*, Nagaung *yi-ta*, Khari *le-ta*, Tengsa *lu-ta*, Nams. *da*, Dhum. *ta-li*, Sak *that-t*, S. Tangkhul *a-kha*, Kanh. *ko*, Ka *kat*, Chong kang, Lahu *pu ka-chang*, N. and C. Tangkhul *ka-cheang*, Khoibu and Maring *tang-la*. Champhung has *a-su-bi* (Nicob. *ti-so-ab white*), Mon *ha-tu* (*cha white*), *ka-tok*; Anam *tho hak*.

The Abor variety with the liquid final, *a-sar*, is Scythic in form. Comp. *a-sar*, *a-chur*, *light*, (*supra*.) But it may be *a-sa-r* (= *sa-ra*).

The same root occurs, in several of its varieties, in the words for *sky*, *sun*, *day*, *light* and *fire*.

Sun, Day.

The Singpho, Jili, Naga, Garo, Deoria Chutia and Bodo *tsan*, *shan* &c. *sun*, is similar to *sha*, *sag* &c. As *day* it is Naga, Manipuri, Burman, Garo, Bodo and Kol, Nipal and Tiberkhad (*a-sunga*, *t'ing*, *tsh-t*, *sun* &c.). The Naga *t'ing* is reproduced in the Kol *sing*, Magar *sin*. For *day* the Manipuri gr. has *nga-sin-lung*, *nga-sun*, *a-sun*, *ma-sung*, *ma-sa-tum*, *tam-lai*; Anam *song*, *mang song*; *thi*.

The sibilant and slender form of Naga used for *sun*, *day*, current in Kol and Magar as *day*, is also, with a postfix, applied to *fire* in Kol and Gond, *singi-l*, *senge-l*, *singu-l* (comp. *ting-lu sun* Naga.)

The root occurs in similar forms as *white* and *moon* (p. 19).

It is probable that some of these forms are Dravidian. Comp. *white* *te-llu* Telugu (*na-lla black*); *light* *mar-sal*, *ma-skal* Kol, (*mar*, *ma*, *man*, *min* &c. *sky*), *bhok-sha* Tuluva; *sky* *sir-ma* Kol; *fire* *tu* Tuluva, *azha-l* Tamil, *thi*, *ti-ya* Malayalam, *chi-k* Uraon, *chi-che* Malé, *singi-l*, *senge-l* Kol; *moon* *tinga-l*, Tamil, Mal., *tinga-lu* Karn., Tuluva; *sun* *singi*, *sing mar-sal* Kol; *day* *sing*, *sugi* Kol; *star* *chukki* Karnataka, *chukka* Telugu, *suku* Gond.

* Anam *that tha clear* &c.

The sibilant root is also current for *white* in several of the Ultra-Indo-Gangetic dialects.

3. The Labial Root.

Sky.

The labial root is *sky* in Thochu mah-to, Manyak mah, and Gyarung tu-mön, teu-mön. This vocable distinguishes the Sifan dialects from Bhotian which has nam. Miri has *de-mur*, (Gyarung in pref. and root), Singpho, Mra, Murmi mu, Burman, Töungtha mo, Burma. wr. in gh, Nogaung ma-bat, Tengsa phum-ching, Garing mun. Manipuri has thang-wan, tang-ban, Lungke wan and Lau fa.

Light.

As *light* it is Horpa s-pho, Manyak wah, Bhotian hod, hwe, eu, Thochu nik, Takpa wot, Naga oitke, Lahuppa hor, Limbu ot. The Manipuri wan, ban, ben, war, Karen k-pa, Lau sa-wang, Anam mang song, Mon ka-ma, do not resemble these forms but some of the preceding ones for *sky*. As they are found in Dravirian as *light*, val-chom, bela-ku, a-veli, bili &c. (Kol mar-sa, mar-sal) and *sky*, ban, van, banu &c., these forms and the similar Gangetic vocable for *sun*, bel Asam, bela Dhimal, ber Male, and *moon* no-kha bir Bodo, appear to be archaic Dravido-Ultra-Indian and not Tibeto-Ultra-Indian. They are Indonesian,—bama Nias, awan Susak, Sabimba, wang Madura &c.

The forms wot, ot are *fire* in Turkish, *air*, *wind* in Ugrian ot, wot, (in Sanskrit at-ma, Armenian ot &c).

Sun.

As *sun* it is Thochu mun, (Gyar. mön, Garing mun *sky*), Sak sa-mi, (sa-meh *fire* Manyak), Naga wäng-hi, Awa vang hong, and Lau wan, lan,—the Manipuri forms for *light* and *sky*.

Air.

As *air* it is Singpho nbong, Naga pong, ma-pung, ma-bung, mong, Newar phai and Sunwar pha-se.

Fire.

In Chinese the broad form is *wind*, *air*, fung, hong &c., Gyami sphun.

The Chino-Tibetan word for *fire* is a variety of the same root. Thochu, Takpa meh, Manyak sa-meh, Gyarung ti-mi, Horpa u-mah, (mah *sky* Thochu, Manyak), Bhot. me, Aher, Burman, Naga, Manipuri, and Nipal groups mi, me, Aka u-ma, (Horpa). Manipuri, Kumi mai, Lau fai. Bodo wat, Mon ka-miot, ku-met, ta-mot, ta-mat, (Thochu mah-to *sky*). Chinese ho, fo, fua, hae or hwe, we. The Mon mot, Bodo wat, have the Turkish form, as in the Takpa wot *light*.

The root is also an archaic Scythic vocable for *fire*, *abe*, *apeh*, *ambe* Aino, fi Japan, hi Fin &c.

Some of the more archaic forms of the labial in the preceding applications, as wot, mot, resemble the Tibeto-Ultra-Indian labial root for *white*, phok, phuk, phut &c.

The Chino-Himalaic labial root is found in both the Chinese and Himalaic forms in Dravirian,—*day* paga-lu Telugu, Karn., paga-l Tamil, Malayalam, pagi-l Tuluva, paga-l Kurgi, pokha-l Toda; *sun* paka-l-on Tamil; *light* bokh-sha, Tuluva; *sky* magi-lu Karn. anc. The antiquity of

this form and its application to the *sun*, *day* &c., are shown by the Yaka-hiri *sun* bug-on-she, Caucasian *sun* buk, buk, baak, *day* bigula, ba; Malagasy *sky* ha-baka-baka, Galla *sky* waka, wak, *god* wak-wak.

4. The Guttural Root.

The only examples of the root in the Tibetan vocabularies are the Bhotian khah, Horpa koh *sky*, which is Turkish kuk, gok. It may be connected with the Bodo no-kha-rang (no kha—bir moon, Angami kharr moon) Kambojan kor, Mon kya; Chinese *light*, kong, kuang &c.; Angami Naga ti-khra, ti-khe, Anam khi air, An. ki day, and with the Lau guttural root for *white* khau, khoung.

Affinities of each dialect.

1. Bhotian.

The form lung, *air*, has the vowel of Horpa, Thochu and Takpa; and the same form is found in the Takpa dung, Naga nang *sky*, Kambojan lung fire, p-lo *light* &c.

The form lhak, *air*, is allied to the Manyak da'. Similar forms are preserved applied to the moon lik, le', da, la &c. The Naga-Gangetic rag, rang, ra &c., *air*, are referable to this form of the Tibetan root. They appear to have been very early diffused, and indicate a distinct transmission of the root from that of the modern Bhotian. The Bhotian is found in its proper form in a few of the Nipal languages only.

The Bhotian nam, *sky*, is also an archaic form. It is only found in Takpa, and in the south also it has a very narrow range. But the common southern rang is the same root in another form.

Khah, *sky*, Horpa koh, has a still narrower range.

Nyi, *sun*, is also Gyarung and Manyak,—Horpa and Takpa preserving the broad form, nga, nang. It is common in all the southern groups, but the prefixes show that the southern terms were chiefly derived from Sifan.

The forms of the labial root in its application to *fire* occur in the other Tibetan vocabularies also.

2. Horpa.

The Horpa pu-ryu, *air*, is connected with the Thochu and Takpa forms.

Koh, *sky*, has Bhotian, Mon-Anam and Chinese affinities.

Nga, *sun*, has also Mon-Anam representatives (ngai).

Nye-le, *day*, is Gyarung, Takpa and Burman.

Spho, *light*, is remotely connected with the Lau sa-wang, Burman mo sky.

U-mah, *fire*, is also Aka.

Like the Thochu and Manyak these vocables show archaic affinities both with the Burma-Gangetic and the Mon-Anam glossaries.

3. Thochu.

The Thochu mo-zyu, *air*, is Manipuri and Nipal.

Mah-to sky has the same affinities as the Manyak mah, that is it is Mon-Anam rather than Burma-Gangetic.

Mun, *sun*, is directly connected with the Gyarung mon, meun, *sky*, and, through it, with the similar Ultraindo-Gangetic terms.

Styaklo, *day* is peculiar.

K is Kalombojan and Angami Naga.

Wik, light, is an archaic broad form not found in other dialects., but differing little from the Manyak form.

Meh, fire, is the common Tibetan form.

This dialect appears from some of these words to be archaic and peculiar like Manyak with which it has some special affinities, and this accords with our previous inferences.

4. Gyarung.

The Gyarung *ta-li, air*, distinguished from all the other Tibetan forms, is distinctive of the Burman group in Ultraindia.

Tu-mon, tu-neun, shy, (mun *sun*, Horpa), is Abor, Burmanic, Murai and Gurung.

Ki-ni sun, is Yuma (*ka-ni*) and—with variations of the prefix, such as *tu* or in Gyarung,—common in Ultraindia, some Ultraindian forms being also Nipal.

Nye, day is Burman, *ne*.

Ti-mi, fire has the common Ultraindo-Gangetic form of the root.

The Gyarung forms are connected with the Ultraindo-Gangetic generally; but they have a close and decided agreement with those of the Burman branch of Ultraindian.

5. Manyak.

Me-r-da', air, appears to be connected with the Naga forms. The labial prefix is a common Naga-Manipuri one, and the compound with *r* also occurs—*ma-r-thi air* Maring. The root *da'* resembles primarily the Bhodian *huak*, and secondarily the Naga, Manipuri *rang* &c., of *rang-che phan-re, thi-rang, khi-rang* &c.

Ma, shy (Thochu *mah-to*) is a link between the Sifan *n fern* and the Lau, Lungke, Manipuri and Dravirian *a* forms, *ban, wan* &c. Taken with the similar forms for *light* it indicates an archaic connection between the Sifan and Mon-Anam vocabularies, and between the latter and the Dravirian, but no spread of the Manyak form specially.

Nyi-ma, sun, is Bhotian.

Nash-chah, day, appears to be an archaic broad form of the root, as in Jili, Changlo and Sunwar.

Wu', light, has no close southern affinity.

Su-me' has the Thochu and Takpa form of the root.

The Manyak forms appear, on the whole, to be archaic, and not closely connected with those of any of the Ultraindo-Gangetic dialects.

6. Takpa.

The Takpa *rhot, air*, is found in Maram *n-hlat*.

The *dung* of *mam-dung, shy*, is Naga, *rang-tung*, and Anam *tung-tien* (a similar compound).

P-lung sun occurs as *day* in Maram *lan-la*, Naga *rang*; as *light* in Naga *rang* Burman *lang* &c.; and as *shy* in Chong *p-lung*.

Nyen-ti, day, has no special southern affinity, save with Limbu and Kharanti.

Wot, light, is Naga and Limbu.

Meh, fire, is the common Tibeto-Burman form.

These words show a close agreement with Naga-Manipuri.

Night.

The Tibetan names and their southern forms (*night, black, blue, green*,

red) have already been given. 1 tshan, sha, shen, sen; sang, sing, ching, zying, hing, cha &c.; 2 spha or s-pha; 3 di, ti, zi; 4 mor, mon, walo, mola &c., or *mo-r*, *mo-n*, *wa-lo*, *mu-la* &c.; 5 kwa-ka', kha-khe, ko-ko', ku-k, ko-k.

Other names are also found in the south.

6. kamo Abor, kham Siam.

7. nak, mak, nyak, nya, ya, nyin &c., *black*, sep; or as a qualitative with the word for *sky*, or *air*.

8. bik Mager in nam-bik (p. 27).

9. *ma-kung* Komi, *kung-keng* Burm. This is Chinese, *kung chung* K-h., *hung chung* K-t.

Obs. Two broad forms of the liquid root appear to have existed in the archaic Himalaic vocabulary, distinguished by the final consonant, the first having -k variable to -ng and t, and the second -m. That the m form was not merely a local variation of ng is rendered probable by the Scythic examples on the one side and the Lau on the other. But the -m like the -k form has produced -ng, -n forms.

A. The -k, (-t) and derivative -ng, -n forms are chiefly applied in the Tibetan vocabularies to *air* and *moon*. The two meanings appear to have been originally distinguished by the prefixes, but the variations in the form of the root are now sufficient to make it a distinct word in each of its uses, and even in most of the vocabularies.

The archaic forms appear to have been lhak, lhuk, lhug, [Dopla has lug in *white*]. Their antiquity is shown by their prevalence in the Scytho-Iranian glossary as *air*, *sky*, *light*, *day* &c. (e.g. a-rak Turk., (*light*) light, light, lux, leukos, lug, lok &c. &c.) The u, o, form is still retained in 4 out of 7 Tibetan dialects for *air*, (Takpa has it also in *sky* and it is the most common vowel in *white*). If a variation of the liquid to the sibilant takes place in Thochu it may also be found in the south, where the archaic Tibetan form for *air* may be partly represented by the s, z forms. The Taying zyung, N. Tangkhul su, Naga yak (=sak), Nipal ro, su, sag, so, Mlch. hash, Abor sar may thus be remnants of the primary Tibetan current. To it are undoubtedly referable the Mishmi, Abor, Koreng, Toung-thu, Kumi and Lau forms for *moon* lho, rhu, lo, lu, lun, lua, duen &c., and the more common lha, la, lau. The final k preserved in Horpa is not found in any of the southern forms, and, on the other hand, there is now no example of the u, o, form with this application in Tibet.

In Tibet Takpa has the only example of this form applied to *sky*, but it is common in the south; in various forms similar to the Tibeto-Ultraindian used for *air*, and generally referable to the same primary current with it. These forms are probably contemporaneous with the Bhotian nam.

The root does not occur as *fire* in the Tibeto-Ultraindian vocabularies, although the labial root is used for *light*, *fire*, *sky* and *sun*. But some of Mon-Anam vocabularies have it with this meaning and in the archaic u form. The Anam lua *fire* is identical with the Taying Mishmi lua of *ha-lua moon*, to which the Siamese luen *moon* is allied. The Kambujan *pi-lung fire*, resembles the Lau lun, nung, Abor *pa-lo moon*, and the archaic Tibeto-Ultr. *pu-ryn*, lung, nong &c. *air*, *sky*. This is one of these applications of the common Himalaic roots by which the Mon-Anam branch asserts its archaic separation from the Tibeto-Ultraindian.

The slender forms of the liquid root belong chiefly to the later Sifan

current to the south. The *t-*, *k-* prefixes show that one of its principal sources was Gyarung. These forms are not numerous, and they are chiefly found in the emaculated Irawady group, the connection of which with Gyarung in its late form is distinctly marked by such vocables. Abor and Aka have similar forms, as in many other instances.†

B. The archaic *-m* form of Bhotian, nam *sky*, which has been communicated to Takpa, is the only Tibetan example of the preservation of this variety of the liquid root for *white*, *p-*rom Gyarung, *to the sky* &c., although the Takpa lang *sun*, and the southern ram, rang &c. may be variations of it and not of lhak. The Lau lom, *air*, has the archaic form, as in the *white* of Gyarung, Kumi, Kani and Lepcha. The Bhotian form is found in the Nipal dialects as *sky* and *light*, nam, nap, rap, rhip.

2. The forms nga, (nash) nyi, nvin, nye applied to the *sun* and *day* in most of the Tibeto-Ultradian vocabularies are evidently archaic. The root appears to be distinct from that which we have been considering, and to be allied to the Chinese.

Horpa has the only Tibetan example of the broad form, nga *sun* (unless the Manyak nash-chah be na-schah). The older southern current preserves an example in Anam ngai, Kambojan group *ta-ngai*.

The most common Ultradian form for *sun*—which has spread to the Nipal group—appears from the prefix to be Gyarung.

3. The sibilant root presents difficulties from its interchange with the liquid. In Tibet it is not current as *white*, and the only undoubted examples in the present series are the broad form chah *moon* Thochu, chah in *day* Manyak, and the slender tsi, chi Gyarung in *moon*, *star*.

In the south the root is still current with the primary meaning *white*. Naga cha, che; sang, song, sing, heng; thuh; Tibarkhad chong, Mon chu, Nic. so; Anam se, sach, (*clear* sang, thank, tot, that tha). *Light* Singpho thoi, Jili thwe, N. and C. Tangkhul she, shea.

The connection between some of these forms and those used in names for *day* &c. is unequivocal, e. g. day M. Angami ti-so, (*sky-white*, *night* ti-zì *sky-black*) Khuri a-songa; *white* Nogaung ta-na-song. Anam clear sang, light su sang, su song, fire su sang, sang lang, (lang clear, t-rang, t-rong *white*), day song, mang song *sky-white* (also *light*), sun rang hong (=mang song). Joboka *white* che (=se Anam); air rang-che, Mijhu song-la day, light, (Anam song), Taying sona light. In *sun* of Naga rang-han, san, wang-he, wang-hi, su-hih, Garo ra-san, san (also *day*), Bodo shyan, Mrung day tsa-lo, (hur-ro *night*), M. Kumi day a-hong-nat, Lungke day sun. In several of these forms the primary qualitative meaning of *white*, *bright*, *light*, (*sky-white* or *bright* &c.) is still obvious.

From the rarity of the sibilant element in the Tibetan names—its absence with the primary meaning *white*,—its preservation with that meaning in Dravirian—and the resemblance of the Ultrando-Gangetic to the Dravirian forms—it seems most probable that the former are Dravirian and not Tibetan. The same difficulty meets us with the labial root, which is both Tibetan and Dravirian. In both cases too, archaic Himalaic forms similar to the Dravirian are preserved by Thochu, which in these, as in many other roots, separates itself from the other Tibetan dialects, and

† In names for *star* some slender forms occur *hi-rek* Mru, *me-rik* Namsang, *le-thi* Muihun, *le-tsi* Joboka &c. (*le*, *le-t-lu*, *le-ta*, *moon*, comp. *tsi-le* *moon* Gyar.)

connects itself with the Mon-Anam and Dravirian. Its *mah sky* (ais Manvak), *styak-lo day*, *chha' moon*, *ghada star* and *phyokh white* are peculiar, and both *phyokh* and *chha'* are Mon-Anam * and Dravirian. It is possible that *zyu air* Thochu is a radical sibilant and not a variation of the liquid of the other dialects. The Thochu sibilant series may be *chha' moon*, *styak-lo day*, *zyu air*, all based on an archaic sibilant for *white* similar to the Dravido-Ultraiidian. *Styak* resembles the Naga *sak*, *sag*, the independence of which from the Tibetan liquid *lhak* (p. 38) is further supported by the Anam *sach*. The Anam *se*, *sang*, *sach*, *that*, *sot*, *su*, *than*, *thi* &c. may be compared with the Drav. *te*, *thi*, *ti*, *chi*, *sha*, *chha*, *za*, *tu* &c.

In many of the Ultraiido-Gangetic vocabularies both Dravirian and Tibetan ingredients are found in the same or in closely allied names. Thus in the Garo *lan-par air*, *lam* is Tibetan and *par* Drav. Naga has the Tibetan *ngi*, *nyi* &c. in *day*, and the Dravido-Anam *san*, *han*, *hi*, *su* &c. in *sun*. Namsang has the Tibetan *rang* for *sky* in its compounds, where Mulung has the Dravido-Ultr. *wang*, *vang* &c.

4. The labial root is evidently one of the most archaic of the formation in its use for *white*, *light*, *fire*, *sky*, *sun*. The radical vowel appears to have been *u*, *o*, and the final cons. *k*, as in the Thochu *white*.

The Gyarung variation *mon sky* (Thochu *mun sun*) is the form to which several of the southern ones are referable (Ahor, Singpho-Burm., Gurung &c.), and the Singpho-Naga *pung*, *mong* &c. *air* is the same variety. Lau, Anam and Bodo preserve a final *t* in *fire* (not *fire* An.= *mogh sky* Burm.).

The forms *ban*, *wan*, *beli*, *ber*, *lir*, *sky*, *light*, *sun*, *moon*, appear to be Dravirian. They are chiefly found in the older southern vocbs. Lau, Anam, Mon, Manipuri; Bodo, Dhimal, Male, Asam. The Lau and Anam have close affinities with the Manipuri and Yuma vocbs. (*sky*, *light*, *fire*).

In addition to the forms given above, Pallegrois' Siamese Dict. supplies *veta day* identical with the Dhimal *bela sun*, Drav. *bela light*.

The Drav. broad form for *sky* *van-am*, *man-am*, *ban*, *banu* &c. (*van-zin star*) *pan-e*, [also *vin*, *min*; *fire* *ben-ki* &c. &c.] is very common in those Ultraiido-Gangetic vocabularies in which Dravirian and archaic Tibetan vocables are found most abundantly. Anam has *mang song day*, *light*, *vang hong sun*, in which the sibilant is *white*, *clear*, *bright* &c., and *mang*, *vang*, was probably *sky* or *air* primarily. The Lau fam. has *sa-wang light*; *la*, *fa-fon*, *sky*; *fei fire*; † *ban*, *wan*, *ta-wan*, *kang-wan sun*; *ban*, *wan day*. In the Manipuri group we find *air* *phan-ra* Champh.; *fire*, *mai* general (Lau *fei*); *light* *ban*, *ben*, *war*; *sky* *tang-ban*, Kapwi, *thang-wan* Khoibu. In Singpho we have *fire*, *wan*, *Jili ta-wen*, (Lau *sun*); in Mijha Mishmi *fire* *mai* (Manipurian, Lau; in M. M. *ai* is a com. final). In the Naga group Mulung and Tablung have generally *wang* where Namsang, Muthun and Joboka have the Tibetan *rang*,—*sun* *wang-li*, *wang he*, (*sky*, *white*), *night* *vang-muk*, *vang-niak*, (*sky*, *black*), *god* *kah-wang*, *lightning* *wang-lip*, *thunder* *wang-kaung*, *air* *wang-yang*, *cloud* *wang*. Garo has *wal*, ver *fire* (war *light* Manipuri gr.), *lan-par air* (Dhimal *bhir-ma*, *biri-ma* the slender Drav. form); Kumi *ku-wang light*, Khyeng *a-wa light*, Lungke *sky wan*, *wyn*.

* The Anam *phuck white* was omitted in p. 29. It is distinct from the modern *bak*, of Chinese derivation.

† A com. Scythic form, *pai*, *wai*, &c.

5. Some of the guttural vowels appear to be the contracted forms of the liquid root with the guttural prefix common as *white* and *star*, *ka-r*, *g-re*, *k-ra'* Tibetan. Khyang has *khro moon*, i. e. *kh-ro*. The Angami term may be *kha-r*, Kambojan *ka-r*, Mon and Kyan *k-ya* (for *k-ra*, comp. *k-re*, *k-ye star*). Angami *kh-ra air*. Gurung has *pi-ra star**, (*bh-la light*, *m-ro air*, *ta-r-kyu white*).

The southern guttural roots may be merely variations of the dental, Comp. Anam thi, *ki day*, *khi air*. These forms and the allied ting, ti of Ultradian are Scytho-Chinese and not Bhotian in their affinities. Ch. tin, tien, tsang tien &c. *sky*; ti ki, hi &c. *air*.

6. It is probable that the several applications of the same root were archaically distinguished to some extent by descriptive words added. In Tibet there are very few such double words. Bhotian and Takpa have compounds for *sky*, Thochu and Manyak for *day*, and Gyarung for *moon*. In the south they are very common. In many cases they are merely two synonyms, but in some one of the words is descriptive. *Day* is frequently merely *sun*; but *sun* is *eye of the sky* or *day*. Anam has mat *t-roi sun*, (*t-roi sky*, *t-ra day*, mat *eye*); mat *nhut sun*, (*nhut day*); mat *t-rang moon*, (*t-rang white*); tho *ba's moon* (*sa sang light*, *sang day*, *sang clear*, tot *clear*, se *white*; thag *white* Mileh., su Nic. &c.; bak *white*). The Manipari group has several examples of names for the *sun* similar to mat *t-roi*, e. g. ri-suk, tsing-mik. Mijha Mialmai has *t-mik*. Tavang M. has ring *nging* (*ning sky*, ringa Mijha *sun*). In the ta-nagui of the Kambojan group it is perhaps *eye* and not a mere def. pref. The Chinese jit than &c. is *head of day* (*day head*).

7. The Himalaic vocables that have been communicated to the Vindyan branch of Dravidian are the Malé *sa-rangi sky* (Nipal *sa-rangi*), and *jim-pro*, or *jim-ra white*, and the Kol *hoiyo*, *hoyo air* (Anam *hoi*, *hoi gio*, unless the Anam name be of Kol derivation).

External Relations.

1. The Himalaic liquid root used for *white*, *air*, *sky*, *moon*, *star*, is also an important one in this class of names in the Scythic, Indo-European and Caucasian families. It is also found in Dravidian in Scythic forms. Some full and broad forms are preserved more largely in Himalaic and Indo-European than in Scythic, owing probably to the assimilative and slender phonology having made less progress in some of the dialects of the former than in most of the latter.

2. The Himalaic labial root has several distinct forms, 1 *phyok*, *p'hook*, *mogh*, *wot*, *mot* &c.,—2 *mun*, *mon*, *mur* &c.,—3 *me*, *mi* &c. Each of these has a wide and archaic range of external affinities, Chinese, Scythic, Caucasian, Indo-European, African. All are found in the Scythic glossary in forms similar to the Himalaic, e. g. *foe bak* Yeniseian, † *wot* Turkish, *e-ba* Aino, bi Urian, Japan; *sun bug-on-she* Yukahiri; *su ring* nu-bak, on-bak-sy Yeniseian, *su-bag* Turkish; *air*, *wind* *wot* Ugr.; *white* *bog-da-rin*, *wag-da-rin* Tungusian, Caucasian has *bok*, *buk sun*, but, but-so, *mont-z*, *mo-z* &c. *moon*, *mu-ch sky*, *air* †. These forms from their distribution and rarity must belong to the most archaic era of the Scythic glossaries. The prevalent forms of the labial are similar to 2 and 3 of the Himalaic,

* But it may be Drav. *pira* (=i-pil Kol).

† Europ. *bok*, *fozo*, *fo*, *so* &c. (? Lat. *foe-us*).

‡ *Vapour* Turk. *bugu*, *bug*, Armen. *bug*, Tanal *bug-ei*.

and they are rare in comparison with the dental, sibilant and guttural roots. The pure labial for *fire*, *mo*, *me*, *mi*, *be*, *bi* &c. is not a late variation of *muk*, *bok* &c., but an archaically distinct and very widely distributed variety. The Himalaic forms *pinuk*, *mogh* &c. are immediately connected with the archaic and nearly obsolete Scythic *bag*, *bak*; and the *n* of *man* &c. shows that it is probably a local softening of forms like *muk*, and not a modern derivative from the prevalent Scythic forms of the labial which have *n*—*bar*, *wal*, *mar* &c. The Sakpa *wan-dar-day* combines a Tibetan with a Mongolian name. The more archaic labio-guttural forms are now found, not in, but around, the central Scythic province, marking the older migrations. In the north they are found in Yukahiri and Yeniseian, in the south in the Himalaic glossary, in the west in Caucasian, Indo-European and African.

3. The Dravido-Urtaidian forms of the labial root, *ban*, *van*, *wan*, *mar*, *bar*, *val*, *pal*, *bor*, *pel*, *vel*, *vil*, &c. &c. are connected with the prevalent Scythic and Caucasian forms. The Arian and North Indian vocabularies have similar forms, and the directly western and non-Tibetan relationship of the Dravido-Urtaidian and Dravido-Australian group of forms and applications is as fully evidenced as any archaic glossarial induction can be.

Caucasian, *moon* *bar-s*, *ber-s*, *ba-z*, *mi-s*, *me-se*, Georgian *m-t-ware*, *t-wa-i*, Ossetic *ma-i*; *sun* *bar-ch*, *bar-ke*, *mil-ch*, *marra*, *beri*, Georgian *mili*, *mi-ch-i*, *mik*. The application of the labio-liquid root to *moon* is one of those numerous glossarial links between Dravirian and Caucasian (and even Caucasio-Semitic and African &c.) which, with its non-Tibetan ideologic and phonetic traits, indicate that its course from the Scythic province to India was across the Indus and not across the Himalayas. Dravirian has *pir-ei*, *za-billi*, *bil-pe* *moon*, identical with the native root for *white*, *light*, *bil*, *vel*, *pel*, *bal*, *bal*, and different from all the Chinese, Tibeto-Urtaidian and Scythic names for *moon*. The western affinities of the labial name are also illustrated by the Indo-European *mona*, *man-k*, *mond*, *maan*, *moon* &c., African *vola-na*, *berra* &c.

Scythic: *air*, *wind*, Ugr. *war-ma*, *bar-s-ka*, *mar-cl-em*, *mer-cl-ish*, *mer-z*, *wire*, Sam. *bil*, *aner-ga*, *mar-k*, *mer-se*, *bar-shi*, Korean *par-am*, *par-an*, Yenai. *poi*, *poi*, *bei*, *pei* (Osiaik *wai*; Fin. *day* *poi-wa*, *pei-wu* &c., *sun* *poi-wa*, *pei-we* &c.); *sun* Fin *wal-hy*; *äre* Fin *wal-hia*, Koriak *myl*, *mil-he-mil*, *mil-gun*, *mil-gu-pil* &c.; *white* Fin *wal-gi*, *bal-gio*, *wel-kes* &c., Ugr. *wai-gam*, *wai-han* &c. Here we find the root with its original meaning *white* preserved in Fin and Ugrian as in Dravirian, although lost in most of the other families, and the special archaic connection between Ugrian, Caucasian and Dravirian illustrated. The Indo-European *weiss*, *wit*, *white* &c. is probably a variety of the same form, *r* passing into *s*, *t*, in the Scytho-Iranian phonology. The Scytho-Caucasic *bar-s* *wind* Ugr., *moon*, *sun* *Cauc.*, is *light* in Armenian *bar-z* (Sanskrit *bha-s*), as in Dravirian, *mar-sal*, *bera-chi* &c. Indo-European has other forms and applications, e. g. *air* *wad* Ossetic, *vata* Sansk. *wat-em* Zend, *bat-as* Bengali, *bad* Hindi &c. &c.; *vent-us*, *wind*, *waa*, *win* &c. *fire* *fuir*, *vaur*, *fire* &c. Semitic *air* *a-war*, *a-wiru* &c.

4. The sibilant root is the most common in the Scythic glossaries; and in the Caucasian it is equally important with the labio-liquid. Scythic: *white* *a-sho*, *za-g-a*, *chuga*, *sak-ria*, *sa-va-a*, *sa*, *siri*, *sir*, *shora*, *sor-ny* &c. &c.; *light* *achik*, *sir-ahk* &c.; *fire* *ag*, *tug-ut*, *tat*, *tol*, *tul*, *tali*, *tuz*, *tut*,

Sam. tu, tui, shu, siu, &c.; *sun* shi, chat, chahi, hai, shun, shun-dy, siuna, sinag, chotal, tir-ki-tir; *day* shi, chaya, tel, e-lur, deli, ta, chel, shun-du &c.; *moon* Yenli, tui, shui, che-p, che-ip, Mang. sara, chara, sara-n; *shy* Yenli, eis, osh, os &c.; *air* sul-ki, chii, sel, tol, tyl, &c.

Caucasian: *fire* za, zo, zi, tze, m-za, m-ze, (Ossetic sin, din); *sun* m-se, b-sha, Georgian tuta; *day* dini, deni, den; *sky* m-teo, chi, mi-chi, p-chu, p-sha; *star* za, zon, su-ri, su-ta, te-ru &c.

In the Indo-European family Scytho-Caucasian forms are common *sun* sur-ya, heli, sol, soane, zon, sun; *day* dina, den, dan, dies, dit, det, dag, tag, day &c. They are also common in the Semito-African glossaries, e. g. *sun* shun, sheng, tsai &c.

The exceptional *Thochu shu' a-ra* (Manyak *nash-chah day*) is Scythic, *cha-ra* Mong., *che-ip* Yenli.

The Dravido-Aryan forms appear to be partly western from their Caucasian-Scythic and Indo-European affinities, and partly archaic Himalayo-Scythic. Some of the Aryan forms, e. g., *sach* or *sak*, *that*, *tot*, are more Scythic than Dravidian. The Dravidian and the similar Gangeo-Ultraiadian, again, have a close resemblance to Caucasian and Indo-European forms. Some of the Aryan and other similar Gangeo-Ultraiadian forms closely resemble Chinese as well as Scythic forms. Probably in this as in other cases, the early Himalaic current—Mon-Aryan—brought archaic Scytho-Chinese forms, and blended them in the mixed southern glossaries with the archaic Scytho-Caucasian and Scytho-Iranian of the native Dravidian family.

		Water.	River.	Blood.
1 Bhotian wr. . .	chhu . .	<i>g-tsang-po</i> . .	kh-rag, kh-rang	
" sp. . .	chhu . .	<i>chang-po</i> . .	thak	
2 Horpa . . .	hra' . .	hra' . .	syé se'	
3 Thochu . . .	chah . .	cha-bra' . .	sa'	
4 Gyaring . . .	<i>ti-chi</i> . .	<i>ti-chi</i> . .	<i>ta-shi</i>	
5 Manyak . . .	dya' . .	dya' . .	sha'	
6 Takpa . . .	chhi . .	chhi . .	kh-ra	

1. The sibilant root.

Water. Blood.

Chlu; tang, chang, chah, cha, sha', sa'; chhi, chi, shi, syé, se'.

The Sibilant vocable for *blood* is Chinese; and it is also the prevalent Ultraiado-Gangeotic one. Chin. chiu, hint, hui, hu, hui, Gyarung syé; Horpa syé, se', Gyarung *ta-shi*, Thochu sa', Manyak sha'.

The forms current for *water* are also Chinese and Scythic. Chin. chui, shui, sui &c., Scythic sa, shui, tui &c.: Gyarung *ti-chi*, Takpa chhi, Thochu chah.

One of the most prevalent Ultraiado-Gangeotic forms for *blood* adheres to the Chinese form for *water*, shui, chui, sui, tui,—Tibet. shui, Deoria Ch. chui, Bodo thoi, Barm., Yuana swo, thwa, Karen thwi, N. Tanghut *a-su*, Nogaung *a-zu*. The Garo kau-chai, Singpho sai, Jili *ta-shai*, Koreng *ta-zai*, Yuana sai, chai, Pengsa ai, are modifications of the same form.

As *water* the full Chinese form is preserved in Kumi and Kyau tui, toi, Khyeng tui, tue, Boongja, Kuki tue, Maram *a-thui*, Koreng *ta-dui*, Song-pu dui, Bodo doi, Khoibu, Maring yui, Nogaung has tau, Khari *a-tsu*,

Angami dzu, zu, Tengsa tu, Namsang jo, S. Tangkhul tu, C. T. tun-da, N. T. ai-chu *water*; Khari a-tsu, Nog. tsu-la-tsu, Tengsa tu-la, Joboka swo-kha, Muthun shon, Namsang jouu *river*.

The Changlo and Lepcha vi, Chepang wi are perhaps referable to the full form shui &c.

The Bhotian form for *water*, chhu (Chin. chui), resembles the Naga and Manipuri tsu, zu, tu, chu, &c.

The slender Ultraindo-Gangetic forms *ma-chi* T. Mishmi, *i-si* Aka, *a-si*, *a-he* Abor, thi Karen, ti Langke, Muthun, Joboka, Chep., Milch., si Mulung, tei Mrung, *a-tsin* Singpho, *m-chin* Jili, *i-sing* Manipuri, resemble the Gyarung *chi water*, *shi blood*, Takpa *chhi water*.

This form is also common as applied to *blood*, hi Khoibu, Maring, Newar, hi-ki Bodo, he Namsang, ih Mulang, Tablung, i Abor, the Sak, thi Kapwi, Kami, Kyun, *a-ji* Muthun, Joboka, *a-zvi* Marun, *a-zi* Champhung, *a-shi* Luhoppa, *ua-si* C. Tangkhul, *wa-hi* Moz. Angami, *a-thi* S. Tangkhul, Kami, Kumi, Langke, Khyeng, *ka-thi* Khyeng, *a-si* Sanwar, chi Garo, *ma-khi* Limbu.

The Kumbhojan *chi-em*, Mon *chi-m blood* is the Sifan-Ultraiudian form with the final labial sometimes found in Mon-Anam vocables, when it is absent in Tibetan (comp. *bird chi-m*, *shi-m*, *chi-ca*). It is probably connected with the Singpho chin, cin. The root occurs with the same final or postfix in Aino *ki-m*, and Tungusian *sho-ma* [See also River].

The Ultraindo-Gangetic shui, tui &c. preserves the full Chinese form now lost in Tibet, and probably marks the oldest Tibetan current. The tu, su forms are allied to the Bhotian, and may indicate a second current. The slender Gyarung, Manyak and Takpa form appears to be that in which the last of the great Tibetan currents diffused the root to the southward. It is possible that all the principal variations may have been independently formed in each of the Tibeto-Ultraiudian provinces, and that the slender forms may be of equal antiquity with the broad. But the broad forms are common to Chinese, Scythic and Tibeto-Burman, while the slender have a more confined range, similar to that of many other Sifan roots and varieties. It is probable therefore that all the Tibetan forms were originally broad like the Chinese; that the Sifan *chi* was a contraction of the archaic Chino-Tibetan *chui*, or an imported Scythic form; and that the Ultraindo-Gangetic *chi*, *khi*, *thi*, *ti*, &c. in general belong to the Sifan-Ultraiudian current, or to the same phonetic era. The Irawadi-Sutlej *chui*, *shui*, *tui* &c. were probably derived from the pure Chinese forms once prevalent in the Sifan province.

River.

The first series for *river* has the common Chinese, Scythic and Tibetan root for *water* in a Scythic form. The Scythic forms are shur, shor Ugric, su, sug, [o-suk, *see*, Kumsch.], *a-sun* &c. Turkish, *a-sun*, chun Mongol. The same form is found in Anam saung, sung, song, som, Kamb. tun-li. Bhotian and Thochu have *a*, Bhot. *g-tsang-pa*, *chang-pa*, *san-pa*, Thochu *cha-bra*. A West Bhot. voc. has muk-sung.

The Murmi syong, Serp. hyung, Lhop. chhu kyong, Lepch. ong-kyong, (*ong water*), Limbu *wo-hong*, Kiranti hong-ka, Gurung khwong, Luhoppa, Tangkhul and Khoibu kong, Koreng slung-gu resemble the Anam sung, song,—but from the Manipuri form gu and the Nipal kyong, khwong, ku, it is probable that the k form is a distinct root; Anam has kong.

The source is the Chinese kang K-t., kiang K-h., which would thus appear to have spread from N. Ultraindia to Nipal.

The Pashtu *sean*, *sin*, *sin-t* (whence *Sin-d*, *Hin-d*, *Ind-us*, *India*) may be Tibetan and not directly Scythic.

The Scytho-Anam *sun*, *sug*, *sung* is a common Indonesian word, *sungai*, &c.*

The siblant, in the common forms for *water*, is also *river* in Gyarung and Takpa. Garo has *chi* (*ti-chi* Gyarung, *chhi* Takpa), Abo *a-sie*, Newar *khui-si*.

The Chinese and Yuma full form for *water* *toi. tui* &c., is current as *river* in Bodo *doi*, Manipurian *doi-dai*, *tui-koak*, *tu-thau*, *tu-lik*, *tu-rel*, *tu*, Limbu *chua* &c.

2. The Liquid Root.

hra' Horpa, *dya'* Manyak, *water*, *river*; *kh-rag*, *kh-rang*, *th-ak* (for *th-yak*) Bhotian, *kh-ra* Takpa *blood*.

The root of the old Bhotian *kh-rag*, Takpa *kh-ra*, Sukpa *kho-ro-gwe* (? *kho-ro-gwe*), *blood*, is found in the Milch. *pa-lach*, Nicobar *ka-nak*, forms which have been derived from a very archaic Tibetan current. The Bengali *rak-ta*, Sindhi *rat*, may be referable to it. The root occurs in the Ugrian *wag-rak*. The softened current form *th-ak*, Lhopa *th-yak*, Sarpa *th-ak*, have made no progress.

The Anam *tiet blood* resembles the Kambojan slender form for *water*, *tik*, (*tak* &c.). The Anam form may be a purely local variation of Chinese.

As *water* the root is Mon-Anam *dak*, *dat*, *tak*, *tag*, *tik*, *muk*, in Nankowry *rak* (Nic. *ka-nak blood*), Bengali *u-dak*, Newar *lau*, *la*. *River* *ta-ha*, *tsu-la-tsu* Naga, *ha-loung* Khyeng.

The form in *rk*, *dk*, *nk* &c. is *river* in Ka *dak-tani*, Kambojan *p-rek*, Burman *m-rik*, *m-riet*, *m-yit*. Khyeng *lik*, Mou *water* *dhik*. This slender form is distinguished from the broad *rak*, *dak* &c. *water*, *blood*, and is similar to the Rakhoing *re*, *ri*, Changlo *ri*, Tuhlung *ri-ang*, Magur *di*, *water*. The same slender form without the final *k* is also found in words for *river*, *tun-li* Kambojan, *tu-lil* Manipuri (two roots), *li ku* Sumwar &c. Burman has also a broad form *m-rach*. † In the Thochu *cha-bra'* the last element is probably a similar vocable *b-ra'*, *m-ra'*; comp. *hra'* Horpa. The Sambawa *b-rang* is the Burman *m-rach* softened. A similar form of the root occurs in Mikir *lang water*, *lang-pi river*.

The root occurs with the labial final in the Lau fam. *nam water*, *river*, *oil*, Kasia *s-nam blood*.

The same root also occurs in Tibeto-Burman names for *oil*, in some cases by itself and in others with the name of the plant from which the oil is obtained. Bhotian has *h-bru-mar* in which *bru* or *b-ru* appears to be an archaic form of the liquid root for *water*. Horpa has *mar-nak*, in which the liquid root (*hra' water*=*chak*) has the Nicobar form. Takpa has *kya-mar*, in which *kya* appears to be an example of the guttural root.

* *Sung-ai water's-father* may have been an archaic Tibetan form, *ai father*, Lhopa, Thochu, Ugrian.

† This form is found in the name of the river *Barak* (*ba-rak*). In Marco Polo's time the Irawady appears to have been known by the slender form of the same vocable, *Brius* (*b-rius* = *m-riet*, *m-rik*).

The Thochu ching-yu appears to combine a Tibetan name for *water* with the Chinese name for *oil*, *yu*. Gyarung has chin-swi (*chi water*), Manyak *i-chi-ra*, *i-ti-ra*.

The sp. Bhotian *nam oil* appears to preserve the Lau form for *water*. The Lepcha *nam oil* is identical with the Lau form.

3. The Guttural Root.

Most of the guttural forms appear to be variations of those in *ch*. The Chinese *kiang*, *kong*, *khoi* &c. may be radically the same as the Bhotian *chang*, *tsang*, but it is more probably connected with the Scythic guttural root. A few of the southern words appear to be directly connected with the Chinese.

River, *kong* Lahu-pa, *kong-pui* Maring, *kyong*, *khwong*, *hong*, Nipal.

River, *kyi* Toung-thu, *kha* Singpho, *tui-koak* Kapwi, *a-run-kai* Maram, *ta-gha* M. Kuni, *khe* Ahom, *khye nam* Khamti.

Sunwar *liku*, *Magar* *kho-li*, *Newar* *khu-si*, *Kiranti* *hong-ku*.

Water, *kwi* Murmi, *kyu* Gurung, *pan-khu* Sunwar; *chi-ka* Garo.

Blood, *ma-khi* Limbu, *ka* Murmi, *koh* Gurung.

li Newar, *hyu* Magar, *hau* Kiranti.

Oil, *ma-khu* Lhopa, *chi-gu* Murmi, *chi-kang* Newar, *chu-gu* Gurung, *gyo* Sunwar.

5. The Labial Root.

Mon has the labial only, *bie*, *pi river*, and it is also current for *water* in Changlo vi, Chepang wi and Lepcha vi. In Lepcha vi is also *blood*. Kiranti has *awa oil*. For *sea* Mon has *bi*, *bui*, Anam bien.

The N. Dravidian vocabularies have a peculiar form of the labial root, *water* *am* Male, *um* Uram. Kasia has also *um* and for *river* *wah*. These forms are distinct from the Southern, but the Scythic original both of the Toda *pa* and Northern *am*, *um*, is preserved in the Pashtu *aba*, *abu*.

A labial root occurs in several names for *river*. It appears in some to be the root for *father* or *mother*. The Lau *fam* has *me nam*, *nam me*, *mother of water* (*me mother*); Mikir *lang pi* (*lang water*, *mi mother*, Kasia, *pi*, *pe female* Mikir), Sak *pi-si*. The broad form, generally *father*, is found in Kuni *ka-wa*, Kumi *ka-wu*, yang-pang (=rang-pang), Mru *a-u*, Lung-ke *ti-wa*, Mrung *tei-ha*. Kyan *ti-poe*, Karen has *ti-mo* (*water's mother*) Mird *a-bunge*, Aka *su-lang*, Sunwar *pan-khu*. In some of these forms also the labial only is retained. *

Other roots for *mother* are also used. Mulung and Tablung have yang-nu (*riang water*, *nu mother*), Nams. *jo-an* (*jo water*, *anu mother* Muth.)

The name for the *sea* is sometimes formed in a similar mode, Burman has peng-le (*father of water*), Khyeng *pan-le*, *pan-lei*, Tungthu *pin-lai*.

Obs. 1. The *ui* form of the aspirate root—the most important of the Ultraindo-Gangetic and found as *water* and *blood* in the older Ultraindian group, Yuma &c.—is probably an archaic Tibetan form, as it is preserved both in Chinese and Scythic,—*water* Sam. *tei*, *sea* Aino *a-tai*, *a-dui*, *a-zui*.

* This idiom is Scythic, e. g. Turkish *aga-n-su*, *y-i-su*, *ir-mak* (*water* *su* Turk., *e-mak* Chukchi, *father* *aga* Turkish, *ai* Ugrian (Perm), *mother* *ila* Koriak).

The *ai* variation is also Scythic, but in the Irawadi tongues it appears to be a local variation of *ui*. The short forms *tu*, *tsu*, *su*, appear to be also local, although similar varieties occur in Scythic vocabularies. A single form imported in one Tibetan vocabulary may have originated all these southern variations of the broad form.

2. The slender southern forms are mostly connected with each other, and derived probably from the Sifan (Gyaring-Takpa) similar form. Its prevalence in the northern Irawadi-Brahmaputran vocabularies, Singpho, Mishmi, Abor, is strongly in favour of its immediate derivation from a southern Sifan dialect; and the extent to which it has been diffused amongst the Irawadi-Yuma vocabularies—especially in its Gyaring application to *blood*—render it probable that it was the vocable of the latest great Sifan migration, the Gyaring character of which has so often been noted.

3. The forms in *n* have a much more limited range. But their application to *river*, their close Scythic affinities, and their occurrence in Bhotian and Anam, show the form to have been archaically distinct from *chui*.

The Dravirian roots for *water*, *river*, *blood*, are distinct, and their line of connection with Scythic roots is also distinct. 1. *water*, *niru*, *nir*, *millu*, *tiru*, Brahui *dir*; *blood* *se-nir* (*red-water*, *se-gyu* &c. *red*), *n-dir-am*, *ke-niru* (*ke-mpu red*, *ke=se*); Comp. also *cho-gu-ma*, *cho-nded red*, *cho-ra*, *cho-re blood*,—and the Uraon and Male *khenso*, *keso red*, *khen*, *kesu blood*. 2. *water*, *pun-al*, *vell-am*; *river* *varu-pun-al*, *aru*, *eru*, *yer*, *pole*, *hole*, *pa*, *puzha* (= *pala*). 3. *water* *tanni*; *river* *tude*, *don-da*; *blood* *ne-turu*, *ne-tar*, *na-tur*; the root *tur*, *tud* &c. is probably a variety of *tir*, *dir*. *

The Kol and Uraon name for *river* adds a 4th root, *garra* Kol, *khar* Uraon. It is found in Angami, *karr*, *kerr*, and Chepang, *ghor*.

The Tibeto-Ultraiidian liquid root is found in Kol *dah*, *dha water*.

A slender form of the aspirate *che-ih water* has been received into Uraon, in addition to the native labial, *um*.

Foreign Relations.

The Sibilant Root.

This, as we have seen, is Chinese, *water*, and Scythic, *water*, *river*. The archaic broad form appears to be Chino-Himalaic. A similar form is found in the more primitive Scythic vocbs. Most of the forms for *river* are Scythic in form, the older Himalaic vocb. of Ultraiidia preserving the pure Scythic variety *sung* &c. (Mongolian, Turkish). The sibilant and dental root is the most important in the Scythic vocabularies. In the older it has the labial prefixed. Fin *we-si*, Ugrian *wi-t*, *wi-t*, *vi-s*, Japan *mi-zu*, Aino *river be-zu*, *be-z*, *water wa-z-ka*, *wa-cha*.

The root is also found in Ugrian for. as in the Caucasian *tzun*, *shin*, *ché*, *p-si*, *p-sch* &c. *water*; *chi*, *p-si*, *cher* &c. *river* (Georgian *wi-tz*); *zi*, *tsha*, *cha* &c. *blood* (also *bi*). Indo-European has *wa-s-e-r*, *wa-t-er*, *wa-da* &c.

The Liquid Root.

The primary forms are *rak*, *rat*, *lak*, *dak*, *nak*, *nuk*;—*nam*. The root

* In sec. 11 of ch. v. the Ultraiidian *taru* is compared with some of the Dravirian forms. But it is now clear, from the collation of the Tibeto-Ultraiidian names, that the root is *ru* (*ta-ru*).

is rare as *water*. In the great Scythic alliance the only analogous forms in Klaproth's vocabularies are the Yeniseian *dok*, Fin *ta-tze*, *za-tse*, which however appear to be referable to the sibilant root. The Lau form is preserved in the Tungusian word for *sea* *nam*, *lanmu*. Ugrian has *lei*, *a-ner*, *a-nyer* *river* (Wolga); Mongolian *nuhr*, *nor* *sea*; Turkish *nehr*; and with the prefix *ta-*, *da-* both roots are used for *sea* *te-ngrer* Hungarian, *to-nyar* Tungus., *ta-lai* Samoidele, *da-lai* Mong., *ta-lai*, *da-lai*, *de-nyis* Turkish. A common Scythic name for *sea* and *river* also contains the liquid root, *mu-ren*, *mu-ran*, *mu-ra*, *mo-ri*, *mu-di*, *mu-ny*, *mu-l*.

The Scythic roots also occur in the vocables for *blood*, *milk* &c.

The root occurs applied to *blood* in *lut*, *leut* of the Lau fam., in the Aryan *rak-ta*, *rat*, *ru-dira*. It occurs in similar forms in African and Asonesian vocabularies (*water*, *river*, *blood*).

Possibly the Indo-European *lac* *milk* may be the same root, but it is at present too sporadic to take its place within this circle of affinities.

This root appears to be one of the primary ones of the Tibetan family, and, from its rarity and the nature of its distribution in the Aso-African glossaries, to have been one of the earliest dispersed. It appears to belong to the western or Ugro-Iranian side of the Tibetan affinities and not to the Chinese and eastern Scythic.

The Labial Root.

This root is common in Scythic, Indo-European, Caucasian, Dravirian, and Semito-African, as *water*, *river*, *sea*, *blood*, &c. But it is doubtful whether in the full forms, in which it is followed by the sibilant, dental, liquid or guttural, it is to be considered as the root or as a prefix. The forms *mu*, *wa*, *bi* &c. are comparatively rare, and, in general, evidently contractions of those which have a second element. Thus both *bi* and *zi* *blood* of Caucasian are referable to the Ugrian *vi-s* &c. *water*, *wi-r* &c. *blood*, because, from the prevalent forms for *water* and *river*, the vocabulary is clearly Ugrian (e. g. *water* *p-si* Cauc., *wi-tz* Georgian). In Ugrian the same contractions take place, e. g. *water* Ugr. *wyat*, *ute*, *uit*, *wu*, *wa*; Samoide *bi*, *it*, *i*, *bu* &c. The Caucasian vocabularies appear in this, as in other cases, to be immediately connected with the archaic Ugrian and not with the Tibeto-Burman. The common roots are subject to a similar range of mutations in every considerable group of vocabularies, as in the Ugrian, East Scythic, Tibeto-Burman, Asonesian, Caucasian and Semito-African.

In the Ugrian branch the labio-liquid is the common vocable for *blood* Fin *wuo-rak* (the full Tibetan form of the liquid), *wa-r*, *we-ri*, *ma-le*, (*lei-pe*); Ugr. *wa-r*, *wi-r*, *ille*, &c., Koriak *mu-lu*—*mu-l*.

Sanskrit has *vu-ri*, *wa-ri* *water*.

The Guttural Root.

The guttural is Chinese. It is also a distinct Scythic root, *kai*, *gei*, *ge* &c.; *kus*; *gol*, *kul*, *kol*, *gun*; Semito-Libyan *khar*, *khor*, *kol* &c.; Dravirian.

Earth. Mountain. Stone.

Earth.

Tibetan.

1. *sa* Bh., *k-cha* Herpa, *se'* Gyar., *sa'* Takpa; *zi-p* Thochu.

2. *ma-li, m-li* Manyak.

Southern.

1. sah Lhopa, sa Marmi, Garung, cha Newar, jha Magar, *a-tha* Maram, ha Namsang, Joboka, Bolo, Garo, ha-wan Muthua, ya Deoria Ch., han Toung-thu. [*Mountain* 3].

2. *th-li, ta-ri* Taving, *a-li* Tengsa, Nogaung, Khari, *ku-di* Songpu, *ka-di* Koreng, ni Kyau, *le-kong* M. Kumi, *w-le* Laungke, *m-re* Burm. wr., *m-ye* sp., nhe Garung.

ta-lai Kapwi, *tha-lai* Khoibu, *nga-lai* Champhung, Luhuppa, C. Tangkhul, *k-lai* Maring, *u-lai* N. Tangkhul, *lai-pak* Manipuri, *ka-lai-hong* Kami [nai Chinese, K-t].

noi Anam, nyai Mijit, bho-noi Dhimal, (nui *mountain*, noi, loi, doi *hill* Lau fam.) [nai Chinese K-t].

lang-nin Khamti.

a-lu S. Tangkhul, *ka-long* K. Kumi, (*ka-lung* stone M. Kumi), *k-rong* Mru, ruong Anam.

dong, (also *mountain*) Anam, *dung* country Mon.

3. *a-mong* Aboe, muang Lau, Siam, phuong, huong Anam, phat Lepcha, lai-pak Manipuri, ba-kha Kiranti, bho-noi Dhimal, ha-wan Muthua, Khamti, phen-din Siam, mien Anam.

4. *ka-tok* Mulung, Tablung; tho Anam [Chinese tho].

5. *ki-ju* Ang. (the-ju iron), su Anam, *ki-je* M. A. (je iron). [See *Mountain* 5].

6. *ta-ka* Jili, nyga Singpho, ba-kha Kiranti, kham Linbu, kho-pi Sunwar, ka Sak, ha kho Sean Karen, gon kho Pwo K., khon Anam.

khe-khel Uroan, *ke-kai* Malé.

7. *dia*, *dia* phan Anam, *de-ye* Kambojan, [Ch. ti, doi, *land* ti, tien].

8. *dat* Anum, *det* Khyeng, te Mon.

o-to, *o-t*, *wa-the* Kol.

9. *din* Siam, Ahom, *lang-nin* Khamti, phen-din Siam. This is probably a variation of *li* (2).

Mountain.

Tibetan.

1. *ri* Bhot., Takpa, *ri'-rap* Horpa, [*Earth* 2, *Stone* 2].

Chinese *lia*, ling, Tungusian *a-liu*, *a-ro*, *a-ra*; Mong. *a-la*, *a-la*, Fin *a-r*.

2. *s-pyá* Thochu, *ta-vet* Gyar., *m-bi* Many.

Southern.

1. [*Earth* 2, *Stone* 2]. *m-lo-di* Dajhla, *no-di* Aka, *ma-long* Koreng, (*ta-lo* earth), *ka-long* Maram, *kh-long* Maring (also earth), kho-lon Pwo Karen, rong Lepcha, dung-kang Tiberkhad, dong Anam, rok Lhopa.

k-lang, *s-lang* Lung-khe, *h-lang* Kyau, *mu-ra* Doing-nak, *mina-ran* Nogaung, ra Dhimal.

lai Mrung, loi Laos, doi Ahom, noi Khamti, nui Anam.

hill, non, *thi* non, *thi* don Sam, non, non sanh, ngan Anam, *pi-nom*, *pi-nung* Kamb.

2. lom, bum Singpho, *ka-phung* N. and C. Tangkhul, Champhung, Luhuppa, mae K. Kumi, *a-pih* Khari, min-a-ram Nogaung, moi Kumi, *pa-awon* hill Mon.

3a. [*Earth* 1, *sa*, *ha* &c.]. *ha-ho* Namsang (*ha* earth), *ha-hoa* Joboka

cha-ju M. Ang., ha-jo Bodo, ha-chur Garo, a-su Deor. Ch. *ha-tsu* Sgau Karen, tok-song Limbu, sa-kha Ang. [Chinese shan].

ma-san Tengsa. [? shan Chinese].

3b. tok-song Limbu [*ha-tok earth* Mabung, Tablung, tu Mon, to-ke Male, dong-ar Gond]; son Anam, sa-tong Jili, tong Burman wr., taung sp., shung, tung Mru.

3c. *m-lo-di* Dophla, no-di Aka, *a-di* Abor.

ram-thing S. Tangkhul, Khoibu, ching Kapwi, Manipuri, cheing Songpu, dan-da Magar, Sanwar.

4. *ta-kung* M. Kumi, (*le-kung earth*), ta-ko Sak, ken L. Khyeng, kung Tang-thu, gun Newar, kwon Gurang, gang Murmi, se-kha Angami, kha Mon, de-kang Mibh., dung-kang Tiberkhad, go, gieng, kon hill, Anam, (*ken ku lau island*), phu-khau Siam, kong jai (*jai high*).

Dravirian kono-*m*, konda, kunu, gudda. [*Earth* 6].

Stone.

Tibetan.

1. *r-do* Bh. wr., do sp., doh Serpa, Lhopa.
2. *gho-lo-pi* Thochu, go-r Takpa.
3. *r-ga-me* Horpa, ru-gu Gyar.
4. *wo-bi* Manyak.

Southern.

1. *n-tau* Maram, Songpu, da Anam, thach Anam.
2. [*Mountain* 3, *Earth* 2]. *mp-hla* Taying M., haung Mijlu, *ku-laung* Mrung, *i-lung*, *i-ling* Abor, *a-lung* Dophla, *n-lung* Singpho, *ta-long* Jili, long Namsang, Mathun, Joboka, *a-long* Khari, lung-zuk Ngr., lung-mango Tengsa, yong Tabl., yangi-yong Mulung, *k-yok*, *k-yauk* Burm., lung Kapwi, C. and S. Tangkhul, Kyau, mung Manipuri, *ngu-lung* Champhung, Luhuppa, *tha-lunz* Khoibu, lung-gau N. Tangkhul, *kh-lung* Maring, *ta-lo* Koreng, *ka-lung* Kumi, long-tchong K. Kumi, lun, lun Khyeng, Lung-khe, *ka-lun* Kami, ta-lon Sak, lung bang Toungthu, lu Sgau Karen, lon Garo, Pwo Karen.

long Lepcha, lohong Newar, lung Limbu, lung-ta Kiranti, lung Magar, phung-lu Sanwar, yuma Gurang, yum-ba Murmi.

3. *ti-mo*, *ta-mo* Kambojan, *ta-moe* Ka. *ta-mok*, *ka-mok* Chong, *ka-mok*, *ka-mouk* Mon, man Kasia, *ta-wha* Mru, pakh-na Uraon.

4. *ku-tse* Ang., *ku-che* M. A. [*shi*, *shik* Ch.].

5. *ua-thur* Dhim., on-thai Bodo.

6. hin Siam, Khamti, Laos. Prob. from hil Asam, and hil from the Bengali shila, Hind. sil.

7. tongi Gond (*mountain* dong-ar).

8. diri, diri Kol.

The names for *earth*, *stone*, *mountain*, *land* or *country*, and *island*, often involve the same root.

In the Tibeto-Burman vocab. the sibilant root is *earth* and *mountain*; the liquid is *earth*, *mountain* and *stone*; the labial is *mountain*, *earth* and *stone*.

1. The Sibilant Root.

Earth.

The sibilant root is used for *earth* in all the Tibetan dialects save Many-

ak,—sa, sé, cha, sé, zi. In the South it is rare, occurring in the Naga-Bodo and Nipal groups in forms referable to the Bhotian and Harpa.

Mountain.

In the Naga group it also enters into names for *mountain*.

The similar root generally combined with it has *h*. *a*.—ha, ha, ju, jo, chur, song.—in Deoria Ch. and Sgan Karen this last form is itself the name *su, tsu*. It is the qualitative *great, high* &c.

In the only full vocabulary of any dialect of the Naga group which we possess—Mr. Hodgson's Bodo—ha, with qualitatives postposed, forms numerous other names.

2. *The Liquid Root.*

Earth.

1a. The only Tibetan example of this application is the slender Manyak *ma-li, m-li*. Burman has the same form modified to *re*, and the same prefix. It occurs with the dental and guttural pref. (*tiyarung*) in Taying Mishmi and some of the Manipurian dialects. The prefix in the Naga *a-li* may be either from *ma-* or *ta-*.

1b. A broad form *lu, long, lung, lung, ruong, ruong*, has this application in S. Tangkhul, K. Kumi, Mra, Anam and Mon (*country*).

1c. The *a* form is rare—Yuma, Nogaung, Dhimal.

2. The form *lai* of the Manipuri group appears to be connected with the Anam *noi* and Chinese *nai*; and with the *noi, loi, loi hill* of the Lau fam. The Mijhu *nyai* preserves the Chinese vowel better than the Anam *noi*; while it is an example of the Anam element found in Mijhu.

Mountain.

1a. Bhotian and Takpa have the slender form which Manyak applies to *earth, li*.

1b. In the south the slender form is not used. But the *o, u* form occurs in Doda, Lhopa, Lepcha and Tiberkhad on the one side, and in the Manipuri group, Pwo Karen and Anam on the other. That this is an archaic Tibetan variety appears from the forms and their distribution,—*roung, rok Lhopa, Lepcha; dung mountain, earth Anam, dung mountain Tiberkhad, country Mon, tung mountain Jili, Burman*. The dental forms, however, may be referable to the qualitative sibilant root.

Stone.

The *l, r* root occurs with this application in Tibet in the Thochu *gho-lo-pi, Takpa gô-r*.

The broad form is more common in the south with this application, than any other. It has all the variations that occur in the names for *mountain* and *earth*—*long, lo, lung, lun, lu, yok [=lok, rek], lung*. It is found in the upper Brahmaputra-Irawady band—Dophla to Singpho—in the Naga, Manipuri, Yuma and Karen groups.

Ahor has both the broad and slender vowels *lung, ling*; Manipuri has an *n* form, *nung*; the Burman *k-yauk, k-yok* is referable to a form *k-rauk, k-rok* similar to the Lepcha *rok earth*.

3. *The Dental Root.*

Earth.

The Chinese *ti, K-h, tin, ti K-t*, the Hok-kien, Hui-lam; *tien land*,

K-h.; tin, ti K-t., *lands* tin to K-t., is allied to the Anam tho and dia, and Kambojan deiye.

The Anam dat, Khyeng det, Mon te, and the Kol te, the, are of doubtful affinity. Similar forms of the sibil-dental root for *large* &c. occur, e. g. det Bodo. In the Anam dat dai, dai is the qualitative *great*, but dat may have been an older form. The Aryan desa, desh, may possibly be the original of det, dat.

Mountain.

The dental and sibilant root appears in general to be the qualitative, *large* &c.

Stone.

The Bhotian do is probably a form similar to the southern dong, and its etymology must share in the doubts that attach to it. The Anam da, thuch, Maram n-tau, are also similar forms of the dento-sibilant root for *large*, ta, tai Chinese, dai Anam, tai M. Mishuni, tau Newar, da Garo.

4. The Labial Root.

Earth.

The labial root is not applied to *earth* in Tibetan.

In the south it occurs in the Mon-Anam family, Muthun, Dhimal, Abor, Kiranti—generally in conjunction with another root.

Mountain.

The Gyarung *ta-vet*, Thochu *s-pya'*, indicate that the full form had a final k, t, and that the Manyak bi is a contraction.

In the south the root is rare and the forms are different from the Tibetan, Singpho having final -n, Manipurian and Nogaung -n.

Stone.

In Tibet, Manyak alone has the labial, wo.

The Mon-Kambojan group has it in a more archaic form, mok. In distinct forms it is also found in Mru, Kasia and Uraon.

From the rarity and the mode of distribution of the labial, the little connection between several of the forms, and the identity of all with current forms for *great*, *round*, *fat* &c., it is evidently the same root; and it was probably originally used as a qualitative in all cases, as it still is in several of the names. Thus in the Muthun ha-wan it follows ha *earth* (comp. *great* wa Burm, la Singpho, *round* pan Ahom, *fat* kwi-pan Gyarung); lai-pak Manipuri has the common Manipuric root for *earth* lai, followed by a form of the root for *large* which may be Manipuric (no qualitives being included in the vocab.), and is similar to the Lepcha phat *earth*, Gyarung *ta-vet*, Thochu *s-pya'* *mountain*, and to the form of the qualitative in Abor bote, *large*, Tengsa *ta-bok*, Khari *ta-bit* (= *ta-vet* Gyar.) *fat*, Manyak *wa' wa' round* &c., and to the Mon-Kambojan *ta-mok*, *ta-mo*, *stone* (= *ta-bok fat* Khari), Manyak *wo-bi*. The Singpho bom bum, *mountain*, is the Bhotian *large* bom. Singpho itself has phum *fat*, in Bodo phung, which is the Manipuric form for *mountain*, phung. The Kumi mui, moi *mountain*, Dhimal bho-noi *earth* (noi *earth*), Kiranti bakha, Abor mong are also similar to current forms of the qualitative—ba *large* Singpho, mon *round* Khanti, pwi *large* Thochu &c.

The Khari *a-pih mountain* has the slender form applied to *large* in Khari itself as in Tengsa, Thochu and Chinese, and to *fat* in the Lau fam.

5. The Guttural Root.

Earth, Mountain.

The guttural root is not Tibetan. It is found in that range of the southern vocabularies which has the greater proportion of archaic Himalaic and Indian vocables—Anam, Mon, Yuma, N. Gangetic &c. The most common forms *khon*, *kon*, *kung*, *kang* &c. best adhere to the primary form—*kunnu* &c. Drav.

Stone.

The Horpa *ga*, Thochu *gho*, Takpa *go*, Gyarung *gu*, is not found in the south. It is probably a comparatively late Scythic acquisition. The Dravirian *kan*, *kol*, *kolla*, *kallu* has distinct Scythic affinities.

The qualitives for *great*, *round*, *fat*, *high*, *long*—into many of the names for which, the same root enters—appear to be used in the present class of words to some extent. The imperfection of the vocabularies is a bar to our discriminating them from the substantive roots, with some of which they are phonetically identical. The words given for *earth* vary in their meanings from the mere soil, to land generally, to the earth as a whole, to a particular country &c., and it is quite possible that, in the wider applications, the qualitative *great* may have formed part of the name. That it should occur in words for *mountain* is more obvious. The same root occurs in names for earth and stone, and the epithet *large* might readily be applied to rocks as well as mountains in the Tibeto-Himalayan region.

In the names *ha-ho*, *ha-jo*, *cha-ju*, *ha-chur*, *tok-song mountain* (5), in which *ha*, *cha*, is the sibilic-aspirate root used for *earth*, *land*, the second element appears to be, without doubt, a Himalaic qualitative for *great*, *high*, *tall* &c. *su*, *thu*, *tho*, *sung*, *jo* &c. (p. 30 to 32); and in the Dror. Ch. *a-tsu*, Sgau Karen *ha-tsu*, the same qualitative appears to be used as the root.

The Manipuri *ching*, *cheing*, *thing*, are much closer to other forms of the sibilant root for *large* &c. than to any of the undoubted variations of the liquid root for *mountain*, *earth*. The adjacent Naga has the broad form *chung*, *chong large*. The Jili, Burman and Mru *toug*, *taung*, *tung*, *ahung mountain*, may also be referable to this root. Tong again is so close to *dong* &c. that it unsettles its relationship also.

In *lo-di* (3) the slender form of the same qualitative follows the liquid root (*large thi* Gyarung, *ti* Lepcha &c.)

The labial is clearly the root for *large* &c.

The most common liquid root for *earth*, *mountain* and *stone* is phonetically identical, in most of its variations, with the liquid root for *great* &c. But as this is necessarily the case whenever the same sound forms different roots, each with several applications, it does not seem possible, with the present small vocabularies, to say if the identity be more than 1 phonetic.

External Relations.

1 and 3. *Earth*. The sibilic-aspirate *sa*, *cha*, *ha*, *tha*, *zi earth* is probably connected archaically with the Chinese *ti*, *tien*, *tin*, *tho*.

In the Scythic alliance this root is not common in the sibilant form, but the guttural, which is very prevalent, appears, from the gradations in several of the groups, to be in general a variation of the sibilant. It is not Ugro-Fin in the sibilant form. But Samiade has the Tibetan form, ja, dscha &c., Aino tui, toi, Japan tsu-tsi, tsi, zi, Korea ta-ti. The Japanese and Korean are probably Chinese. Turkish has sir, ser, zir, yir, &c., Aiao siri-kata, Korea chala, chli, hilyi, Tungusian toru, tor, Turkish tor-pach &c., Mongolian has cha-dsar, gra-syr &c.; Votiak has mu-sem.

Caucasian has sach, sech (Ugrian *hill*, Chinese *earth*) Ossetic; di-cha, mi-tzi (Fin) Georg.; tzu-la, tu-la, chu-llah, (Korea chu-lu &c.) cheh, chy, mu-sa, mi-sa, hi-su (Fin *mountain*), Cauc. proper.

Scythic forms are found, as usual, in Indo-European. The pure sibilant occurs in Zend sa, soo. The sibilic-liquid sir, ser, tor, tura &c. is represented by the Celtic tir, dor, duar, Latin terra; and the labio-sibilant of Scythic and Caucasian by the Aryan mci-ti, mi-ti, mi-ts &c. The Slavonic family has sem-lya, sem-ya, sem &c., Zend semo, Sanskrit sima, Persian zam-in (synna-it, shim-ta &c. Kamsch.)

Stone. The sibilant root is also applied to *stone* in Chinese shi, shik, chio, sa'; in Scythic—Fin tshi-wi, zi-wu (ki-wi), Ugrian is (Permian), Japan, isi, ishi (tsi *earth*), Aino shio-ma, Tungusian za, hy-sha, Yeniseian shish, Mongolian tsholo, tshila-choo, Turkish tshol, tash &c.; in Iranian sil-ex, shi-la, sila &c.; staina, stain, steen, stone &c.; in Caucasian i-zo, che-zo, hin-zo, she-tu, Ossetic dor, durr (Tungusian tor *earth*). Semito-African ha-dsar, ha-sar, a-sar, gi-sha.

Mountain. The same root is applied to *Mountain* in Fin mo-tschii, mo-zi (hill me-to, ma-tas); Ugrian, is Perm (also *stone*), tshoi Perm (syä, mu-syesu *earth*); hill Wolga u-sach, ech-sait; Samiade sye, seda, soti &c.; Yeniseian dschii, chui; Turkish syrr, kirr, * tu, tach, tag &c.; Ugrian (Wogul) hill sal, Mongolian hill shili.

Semitic has also the dento-liquid of Scythic, tiru, turo, toira; serri Hara-gi, tulu Galla.

Armenian has zori *hill*.

From these examples it appears that the sibilant root is one of the primary Asiatic ones, and that the Tibetan form associates itself with the guttural Chinese, Samiade, Caucasian and Zend, shi, sa', dscha, sach, sa &c. &c., and not with the liquid Scytho-Iranian, Georgian and Semitic tzula, tur, siri, sila &c. &c.

2. The most important root is the liquid, of which the more archaic broad forms, lung, long, rok &c. are preserved in the South,—Tibetan having lo as an element in Thochu gho-lo-pi *stone* only, the form in *earth* and *mountain* being slender. If the root be not the native liquid root for

* The Turkish syrr, kirr suggests a connection between the sibilic-liquid and the guttural-liquid root—the latter being common to Scythic, Indo-European, Caucasian, Semitic and Dravidian. Scythic,—gora Fin, kur-uk, ker-as Ugrian, kar, kono-ny Yeniseian (which has also kai, chai, dschii); Indo-Eur.,—gora, kore, gura Slavonic, gor Celtic, giri Sanskrit; Caucasian kur-sh; Semitic gar, gor &c.; Pashtu gar; Drav. kunnu &c.

great &c. (pp. 31, 32)—the forms being, to a great extent, identical—it has few external affinities. This circumstance is strongly in favour of the sibilant being the substantive Hindalaic root, and the liquid being merely the qualitative *large* &c.

In the Scythic alliance the liquid root appears to occur only in two dialects of Ugrian, loch Ostiak *mountain*, rok earth Wolga.

4. The labial is a Scytho-Iranian and Caucasian root for *Earth, Stone, Mountain*, but it does not appear to have any connection with the Tibeto-Burman forms.

Mountain. One of the most widely spread varieties for *mountain* is the labio-liquid. Scythic—ware, wuori, Fin panda, waa-da, ponda, awa-pun, pel, pal-ta, hill war, moi-ma Ugrian, mari, mony-moi-si, bor, bre Samoiede, huri, no-bari Aino, urra, uro Tungusian, ula, ola (*hill* bol-duk, lori) Mong., mur-m Turkish, a-mar hill Yeniseian. Caucasian mehr, meer, bil, pil, da-bura, bir-d. Indo-European par-va, par-bat; berg, barg, biarg &c.; mons. Dravirian vare, male, buru, par-ta; Australian an-birik, wari-at, mur-do; Indonesian batu, palu.

A labio-guttural is found in Circassian buch, buko-du (*earth* bak Les-gian, bach Yeniseian, ma, mag, myg Ugrian, tor-pach Turkish) and Malagasy volhi-ts, buhi-tra &c.

Earth. Scythic,—ma, mu, mag, my, myg Ugrian, pan, pany, biny, bach Yemi. Drav. puda-vi, pulo-va. Nilotic—barr Tama, baro, bara Dan-kali &c.

Stone. pai, pui, po, phi, pi, Samoiede, poi-nah Aino; vatu, batu Malagasy; wari-at, walang, wal-bi, bura, maramo, &c. Australian, &c.

NAMES OF PARTS OF THE BODY.

	Head.		Hair.		Eye.		Ear.
1	Bhotian wr. m-go	wr.	{ s-kra s-pu		mig		r-na
	sp. go		kra, ta		mik		am-cho
2	Horpa gho		s-pu		mo		nyo
3	Thochu ka-pat		{ hom-pa grong kachu		kan		nukh
4	Gyarung ta-ko		{ pu kra	{ tai-myek tam-myek			tir-ne
5	Manyak wulli		{ mui tsi		mni		na-pi
6	Takpa gok-ti		{ pu kra		me-long		ne-hlap

<i>Mouth.</i>	<i>Tooth.</i>	<i>Hand.</i>	<i>Foot.</i>	<i>Bone.</i>	<i>Skin.</i>
1 kha	so	lag-pa	r-kang-pa	rus-pa	pag-spa
	kha	so	lango	kango	ru-ko
2 ya	syo	lha	ko	re-ra	pag-pa
3 dzukh	swé	jipá	ja-ko	ri-pat	g-la
					ra-pi
4 ti-kke	ti-swe	ta-yak	ta-mi	sya-rhu	ti-dii
5 ye-ba	phwi'	lap-ché	lip-ché	ru-khu	g-ra'
6 kha	wá	la	le-mi	ros-pa	phyekh

Head.

1. The guttural root connects Bhotian, Horpa, Gyarung and Takpa. It is Ugrian *og*, oike, *ug-ol*, *ug-on*, Yeniseian *koi-go* &c. The Gyarung form is prevalent in Abor, and the Nega-Yuma group. Mishmi has *w-kau*, *kou*. The Takpa *gok* is found in Manipuri *kok* (Limba *tha-gek*). It has been communicated—by the Naga fam. apparently—to Male and Uraon, *ku-pe*, *ku-k*; *kho* Namsang, *ta-ko* Tengsa, (*ko hair*), *ta-ko-lak* Nogaung, *u-ku-ra* Mishmi, *kho-ro* Bodo, *kha* Keren, *kau* Champhung, *kui* Luhuppa, *a-kao* N. Tangkhul, *o-kao* S. T., *lu-gu* Khyeng, *a-khu* Sak, *khang* Mithun (*kho hair*), *khang-ra* Joboka (*kho hair*), [*kra hair* Bhotian &c.], *khong* Burma. wr., *ghaung* sp., *nggun* Jili.

It is also applied to the *hair* *ko* Nogaung, *ku* Tengsa, *kho* Mithun, *kwa* Khari, *kin* Deoria Chutia.

2. The Thochu *katat* is one of the peculiar vocables of this dialect. It appears to be Scytho-Iranian, and to have no Ultraindo-Gangetic representatives.

3. The Manyak *wu-lli* appears to be an example of the Scythic liquid root. The Dhimal *pu-ring* is derived from it, and the Khari *ta-lim* has the same slender form. The broad one is found in the Manipuri gr., *a-lu*, *lu*, Yuma *lu*, *lu*, *a-lu*, Abom *ru*, and Magar *mi ta-lu*, (but the last may be *talú*, Drav.). The broad form appears to be that of the Lau family, in which the common form, *ho*, *hua*, seems to be a softening of the liquid root preserved in Abom. It is also applied to *hair* in that fam. See *Hair*.

This root for *head* is found in the forms *long*, *ron*, *rung*, *ru*, *lom*, attached to the names for the *eye* and *ear* in some dialects. For *eye* Takpa has *me-long* (*eye of head*, *me* is the root for *eye*), Taying Mishmi *mo-lom*, Garo *mok-ron*. For *ear* Abor has *nya-rung*, *no-rung*, Mishmi *na-k-ru*.

4. The dental and sibilant root is common in the South for *head* (See *Hair* 3.).

Hair.

There are two prevalent terms, *pu hair* in general, and *kra* that of the head.

1. The labial is found in all the vocabularies. The form *pu* connects Bhotian, Horpa, Gyarung and Takpa. The Thochu *hom* and Manyak *mui* are exceptional.

The root is Chinese, mo Kwangtung, fah, mau Kwan-hwa, ho &c. in other dialects. It is also Seythic.

The term is rare in the south. Dhimal has the Manyak form *mui ra*. The Tablung Naga *min*, Sak *ku mi* (*ku head*), Garo *ku-man*, Bodo *kha-mon*, are probably of distinct Chinese origin. The Naga *min* resembles the Chinese word for *face* *min*, and the Kwan hwa *pin* (Kwangtung *pin*) the hair on the temples. Kiranti has *moa* and Gurung *moi*.

Applied to the *head* it occurs in Singpho *boag*, in the compound Burman *chhan-bang*, s'ha-ben *hair*, in Songpu *pi*, Maram *a-pi*, Koreng *chapi*, in Sunwar *pi-gu* and Magar *mi talu*.

The Kol *bu*, buho, behu *head* (*ub*, up *hair*) may be Tibetan.

2. *kra* occurs in all the vocabularies save Manyak. The Thochu form, *grong*, is exceptional. The root, if the guttural, may be Seythic, *kar-ny* Fin, *kar-au* Aino. The guttural is an element in words for the *beard* in Yeniseian and Tungusian.

This root also is not common in the south. It occurs in Singpho *kara*, and with the meaning *head* in Gurung *kra*, Mishmi *a-kura*, Bodo *khoro*, and Manipuri *ta-kolak*.

From the disposition of Bhotian to merge the prefix in the root, *kra* is probably a contraction of *ka-ra*. In the Thochu *g-gong* the root has a form similar to the Anam *long*; ph-rum, Ahoim, ph-om Lau, Siam; lu Khyeng, *ta-lu* Tong-tha. In some of the Southern forms the first element is not a def. pref., but the guttural root, and the Tibetan *k-r* may also be radical, e. g. *ta-ko-lak* Manip.=*s-k-r* Bhot., *m-ku-ra* Mishmi &c.

3. The Bhotian *tsi*, Manyak *tsi* and Thochu *ka-chu*, is also Seythic,—*ata*, *at* &c. Fin—and Chinese. Kwangtung, *tsz* hair of the upper lip, (Manyak *tsi*), *su beard* (*ka-chu* Thochu). The Chinese *than*, *sau*, *head*, may be also connected with the Tibeto-Ultraindian dental and sibilant roots for *hair* and *head*.

In the south it is the most common term; but the source of some of the forms appears to have been a broad archaic vocable early introduced by the Mon-Anam family. Karab-jan *sok*, Montok, *sok*, thwat, suet, Karen *thu*, Kasia *slauin*. This form is allied to the Thochu *chu*. Mikir has *chu*, and Namsang Nag *ka-cho* (=Thochu *ka-chu*), Mufung *su*, Dhimal *tu* (*mui tu*), Taying Mishmi *thong*, Lepcha *a-choin*, and Newar *song*.

The Bhotian *a* appears to be related to the common Irawadi form. Mijhu *cham*, Angami *tha*, Burman *chhan*, s'ha; lu-sam Khyeng (lu *head*), a-sham Kumi, sham Kumi, Mru; Sunwar *chang*, Magar *chham*, Limbu *tha-gi*.

It is also one of the most common southern names for the *head*. Anam mang *song*, *tha*. Naga *sang*, Angami *a-tsu*, Abar *mi-ta-b*, mi-ta-k, tu-ku, *ka-tau*, Toung-thu *ka-tu*, tu; gu-toh Lhopa, a-thi-ak Lepcha, tha-gek Limbu, tang Kiranti, tho-bo Marmi, chhon Newar.

The Chinese *thau*, *shau*, may have been the original of both *a* and *u* forms for *head*, *hair*. Anam has the derivative *dau head*.

Eye.

1. The labial root is found in all the dialects save Thochu. The slender form connects Bhotian with Gyarung and Manyak. While these slender forms preserve the final guttural, the Horpa *mo* preserves the vowel of the Chinese form,—*muk* Kwang-tung, mo Kwan-hwa, *mok*, *mi*, *ba* in other dialects.

The labial root is common in the Seythic vocabularies as applied to the

Head, Hair, Beard, Face, Mouth, Lip, Teeth, Nose, and Ear, but it is either in the pure labial form, or with a liquid or sibilant final, r, l, n, s. The guttural occurs in the Ostiak *wai-mik face*. The Japanese *me, ma-nako eye*, are related to the Chino-Tibetan root; *face* is *a-mote*.

2. The Thochukan is the common Chinese-gan, Kwang-tung &c. (yen in Kwan-hwa).

The Brahui and Dravirian *khab, kan*, appears to have been derived from the Thochu form of the Chinese root. The Turkish *kar* appears to be also connected with the Thochu and Drav. form.

The Manyak *mi* and Takpa *me* appear to be referable to the slender form *mik, myek*; *mi* is explainable as *min* from *ming, mik*. The form *min* is found in Mra, *mi* in Mijhu Mishmi, Singpho, Dhimal, Angami, and several Yuma dialects, *mi, me, a-mi, Karen me, khyeng mi-u-i*; *min* appears to be an archaic form of the root, as it is applied to *face* in Chinese *mien, min*, Abor *ming-mo (eye a-ming)*, and probably in other Tibeto-Ultrindian dialects. The word *face* is not included in the short vocabularies.

The form in t, d, occurs in Lhopa *mi-to, mi-do* (also *mir*), Miri *a-mi-da*, N. Tangkhul *a-mi-cha*. As *-to, -da*, is a Lhopa postfix (*gu-toh head, gong-do egg* &c.) the root may here have the contracted form. But *mito* may be *mit* vocalised. Kyau has *me-et, me-to*. The Bhotian form *mik, mig* is the most common Ultrindian-Gangetic.

The broad Mon-Anam *mot, ka-mot, pa-mot, mat, Kuki mut*, appears to be a distinct importation by that family. It is directly referable to the Chinese *mok, muk*. The form *mak* is also found in Champh. *a-mak, Garo mak-ar, Bodo mag-on, and Kiranti mak*. Naga has *te-nok*.

The Deoria Chutia *muku-ti* appears to have the full Chinese *muk (ti* is the Takpa form of the dental postfix).

The Gyarung *myek* is found in Burman, *myek-chi, myet-si*.

The Abor *nyek, Naga te-nyek, te-nik* appears to be a modification of a similar form. It is found in Lau *pa-ned*, and Kambojan *pe-ne, pa-nek*.

The form *met, med*, has been received by the Kol dialects.

The common *ta* of the Lau fam. appears to be from *mi-to* Lhopa, *mi-da* Miri, *mat-ta* Shan. *Face* is *na ta*, in Namsang than.

The Takpa long (*Head* 3) of *me-long*, is found in Taying Mishmi *mo-lom, ma-lam, Garo mok-ron, mak-ar*, (See also *Ear*).

Ear.

1. *na* Bh. *wr.*, and Manyak, *nyo* Horpa, *ne* Gyarung and Takpa, are connected. The Thochu *nukh* or *nu-kh* is probably a full archaic variety of the same root. If so, it is neither Chinese nor Scythic with the meaning *ear*. Chinese has *rh, ro, ngi, li, i*; Kamchatkan *illa, yel-uth, all-od, il-yud*; Caucasian *en, in, lai* &c.; Indo-European *ohr, ur, aur-is, or-eil*; African *ilai, iroi, ulu-k, ul-ge, nia-ru, noa, no-f*.

In some languages the *ear* derives its name from its resemblance to a *leaf*. In the Takpa *ne-b-lap ear, b-lap* is *leaf*. As the Tibetan *na* does not closely resemble the Scythic and Chinese roots for *ear*, it appears to be itself an older application of the same root for *leaf*. Bh. *lo-ma*, Horpa *ba-li*. In Manyak it has *n* (as in the word for *ear*) *nip-ché*; Sukpa has *nai*. In the south *ne, na, lai* occur, as well as other *l* forms. In the Manipuri group *na* is the common form, and in some of the dialects the forms for *leaf* and *ear* correspond, e. g. Songpa *nhui leaf, a-nhu-kon ear*; Cham-

phung sing-nu *leaf*, khu-nu *ear*; Kapwi na *leaf*, ka-na *ear*; Angami pa-nye *leaf*, a-nye *ear*.

The Chinese yip, ip, ye *leaf* is perhaps a softened form of an archaic root similar to the Tibetan nip, lap &c.

The Burman rwak *leaf* (yuet sp.) and the Kambojan si-lök are archaic forms with final k for p, as in the Thochu nukh *ear*.

The Tibetan root is very common in the south, mostly in the a form—Singpho, Naga gr., Manipuri gr., Yuma gr., Karen, Burman. Nipal gr.

The o, u, form of Horpa nyo and Thochu nukh, is found in Kumi kuno, Khyeng hno, ka-nhau, Lepcha a-nye-r, Sunwar no-pha; while the common Naga form is na, Khari has i-nhau, Nogaung te-naung and Tengsa te-lanu.

The slender form of Gyarung and Takpa ne, is found in Angami a-nye, Limbu ne-kho.

The Mijhu Mishmi ing, Maram in-kon and Mikir in, an, are peculiar variations of the slender form.

In the Dhimal nia-tong, tong appears to be the Tibeto-Ultrainda dental postfix as in Tib. me-*lag flower*, men-*to Takpa*, Lhopa me-*da eye*, Abor lam-*te road* &c. It occurs with the same form in the Dhimal si-tong *tooth*, and in the Garo lha-tong *tooth*, ho-tong *mouth*.

The root for *ear* is combined with the liquid root (for *head* probably), in some dialects nio-rong Dophla, nya-rung, no-rung Abor, Lepcha a-nye-r.

Taying Mi hmi has na-kru and n-kru-na (*m-kura head*), Karen na-ku (*ku head*), Garo na-chil, Songpu a-nhu-kon, Tangkhua a-kha-na, o-kha-na, na-ko-r, Khoibu kha-na, Limbu ne-kho, Magar na-kyep.

Maring has na-mil and Aka na-bar. In the Nipal gr. a labial postfix is frequent, but it appears to be the definitive in some instances,—na-ba Kiranti, na-pe Murni, nai-pong Newar, na-be Gurung, ne-pha Sanwar (na-*vo* Lhopa).

If na &c. were originally *leaf*, these compounds were probably "leaf of the head".

The Bodo kho-ma, Gara ma-chor, Kasha s-kor appear to have only the word for *heart*, the root for *ear* being dropped. (In the Mon-Aaam comp. voc., kor &c. is treated as the root for *ear*, improperly as I now think).

2. am-cho Bh. sp. This term appears to be exceptional in Tibet. Serpa has a fuller form am-chuk. This appears to be also an ancient Tibetan word for *leaf*. It is found in some of the Naga dialects, pan-chak, hu-chak, phum-yak, (pan &c. is *tree*), Deoria Chutia chia.

The Tengsa and Nogaung am is probably a contraction of the Tibetan am-cha. Robinson gives man-cho as the Bhotian term, from which it would appear that nam is a form of na, nap, lap &c.

The Lau family has hu, Lung-khe hua, which appear to be modifications of the l, r, n, root for *ear*, *leaf*, the liquid sometimes becoming aspirate in the Lau fam. In the same way the Gurung lau *leaf* is lau in Newar; and the sp. Bhotian hyo-ma appears to be a softening of lo-ma.

Mouth.

1. The Bhotian kha, Takpa kha and Gyarung ke are connected. The Horpa ya is probably a softening of kha, and the Manyak ye is referable to it.

The root is Chinese and also Scythic,—kau Kwan-hwa, hau Kwang-tung.

It is not common in the South. Songpu aka, Kumi uk-kha, Taying Mishmi ta-khu, ku-kwen, Aka gam [Garo wa gam *tooth*], Bodo khou-ga, Garo ho tong (pha tong *tooth*).

2. The Thocho dzukh is perhaps the same root—as the sibilant and dental found in several of the southern dialects, Naga gr. *mun, chu-sim*, Manipuri *chil*, Kuki *taung*, Garo *ko-sak*, Kasia *shin-tur*, Maram *ma-thu*, Marmi, Gurung *sung*, Sunwar *so*, Kiranti *doh*, Chepang *mo-thong*, Shan *thot*, Sgau Karen *tha kho* (*kho head*). With the labial final it is found in Ahom and Khamti *sup, sop*.

The root is Scythic and Chinese. Fin *su, sun, sum*, Ugrian *shob, shus* &c.; Chinese *sui, chui* &c. See *Tooth*.

3. The most common root in the South is the labial. Aber *na-pang, nu-pang*, Naga gr. *te-pang, ta-bang, tu-pin*, annu (Moz. Ang.). Kumi *la-buang*, Khyeng *a-hmanong*, Manipuri gr. *ma-mun, cha-mun, kha-mar, kha-mor*, S. Tangkhul, Khoi, Maring *mur*; Lepcha *a-bong*, Limbu *mura*.

This root appears to be of Mon-Anam origin,—pak Lau gr., meng, mieng Anam; *pan, kha-mon-pan* Mon; Ka boer, Katobojan *nat*, Nicobar *mino*.

The labial root is Scythic—*a-m, ha-mun, a-ma, a-man*, Mongol, whence probably the Mon-Anam *pan* &c.

Singpho has *mingu, ngzop, Jili nong, N. Tangkhul anis, S. T. onis*, Burman *nhop, nlok*, Pwo Karen *no' Sak ang-si*, Mru *naur* Mijhu *Mish-mi ngyut*, Magar *nger*; Chong *ra-neng*.

The root is Scythic *nyan* &c. Samoiede.

Tooth.

1. The Bhotia *so* and Horpa *syo* are related. The Thocho and Gyarung is probably the archaic form. The Manyak *phwi* and Takpa *wa'* may either be referable to it or to the labial root for *mouth*.

This vocable is the Chino-Scythic root for *mouth*. Chin. *sui, ch'ui, chui*. Fin *sa, sun, shum* &c. Ugrian *shas, tas, shob* &c. [S. Slavonic also has *sub*]. It is *tooth* in Turkish *tish, tusch* &c., Samoiede *tipe, tip, Ostiak tiwa*.

It is not very common in the South, unless it varies to the labial. Mijhu *Mishm, tsi*, Anam *si*, Burman *sw*, *thwa*, Pwo Karen *thwa*, Marmi *swa*, Gurung *sak*, Magar *syak*, Changlo *shia*, Lhop *sah*.

Several of the forms strongly resemble those of the sibilant and dental root for *mouth, head, hair* (*Hair* 3), and the root is probably ultimately the same. Comp. the Mon-Anam *sok hair*; Aber *mi-tuk*, Lepcha *a-thiak head*; Garo *ko-sak*, Sunwar *so mouth*; Gurung *sak*, Magar *syak*, Bhotia *so, tooth*.

2. Labials are more common. Singpho *wa* (Takpa *wa'*), Naga *va, pa, ta-plu, ta-bu, pha, ta-plia*, Manipuri gr. *a-va, a-ba, v-ha, ha, a-lu, hui*; Garo *pha tong*, Aka *pli*, Daphla *fig*, (Manyak *phwi*), Aber *i-pang*, Siamese *fan*, Katobojan *tim-lang*; Sgau Karen *mo*, Yuma *a-pla, la, a-ho, ho-u*; Lepcha *a-pho*, Limbu *he-ba*, Newar *wa*, Mischang *bung*.

The root is identical with the labial one for *mouth*. In Scythic languages also it is used for *tooth*,—Ugrian *pani, pin, pon-h, pan-kt*.

3. Mijhu *Mishmi lan, la*. S. Tangkhul *aka-ra*, Anam *rang*.

This exceptional term is probably the liquid root for *head*, which also occurs attached to roots for *ear, eye*, &c.

4. The Lau *khiao, khia*, Jili *kong*, Kiranti *kaug*, are probably related to the guttural roots for *mouth or head*. The Sunwar *kryu* may be connected with the *k-r* root for *head, hair*.

5. Kawi *nga*, Tang-thu *ta-nga*, Maram *a-gha*, Manipuri *ya*, Song-pu *nai*, Mon *n-k, ngeat, nget*. This vocable is Chinese, *nga Kwang-tung, ya kw: n-h va*.

Hand.

1. The final guttural connects the Bhotian lag, lango and the softened Gyarung yak. The Horpa lha and Takpa la are probably contractions of the Bhotian form. Tha Manyak lap appears to be a distinct archaic form, as a similar form is applied to the *foot*, lip.

This form is the same that is used for *leaf*, and it is also found in southern languages with both meanings. Guring lap-*ta* *hand*, Murni, Newar lap-*te* *leaf*.

The -k form is an archaic variety of the same root, as it is also current for *leaf*.

The root has both meanings in Scythic also. The Bhotian form resembles lag-ol Ugrian, i-lik Turkish, *hand*.

2. The Thochu jipa is peculiar.

1. The common Tibetan root is prevalent in the South Lhopa la-*pa*, Abor e-lag, Aka lak, Naga dak, chak, yak, Garo jak, chak-reng, Mrung yak.

Singphu leta, Burman lak, let, Mro rut, Lepcha ka-lik.

The Manyak -p form occurs in Mijhu Mishmi yop, and Guring lap-*ta*.

3. Tengsa ta-khat, Nogaung ta-kha, Khari ta-khet, Manipuri gr. khut, kut, a-khui, kuit, hut, Lungke kut, Nyau ket, Kumi kek, a-ku, ka, Kami a-ku, Sak ta-ku, Khyeng kuth, Bodo a-khai, Dhimal khuc, Ahom kha, Chepang kut-*pa*, Nagar hut pak, Laobu jak, ta-*pha*, Kiranti chuku-phema, Changlo godang, Milchanang god, got.

4. Jili ta-phan, Songpu ban, Koreng cha-ben, Maram van, Champhung a-pan, Luhuppa pang; Angami a-bi (*foot* a-phi, u-phi), Sunwar g-wi; Lau fam, mu, mo, mi.

Chinese words for *hand* and *foot* are found in some of the Ultrindian vocabularies, that for *hand* being in some applied to the *foot*, and that for *foot* to the *hand*. Hand shau Kwan-hwa, Kwang-tung; Finger shau, chi, *ib.*; Foot tsu Kwan-hwa, tsuk Kwang-tung.

Taying Mishmi thyea, a-tua, Anam tay, Ka dei, Mon tway, tai, Kasia k-ti, Karen tshu, Toung-thu su, tsu, Deoria Chutia otun.

Sunwar ta-b-le. (See *Foot*.)

Foot.

1. The Bhotian kang, kango, Horpa ko, is the Chinese root keuk, kioh, kha.

2. The Manyak lip-che and Takpa le-mi, have the same liquid root that is also applied to *leaf*, *ear*, *hand*.

3. The Thochu jako appears to be Turkish, ajak.

4. The Gyarung ta-mi, and Takpa mi of le-mi, may be connected with the Chinese po, a *footstep*.

1. Manipuri khong, Singpho la-gong, Jili tak-khyai, N. Tangkhul a-kho, C. T. a-kho, S. T. a-ke, Kapwi ki, Maring ho, Mrung ya-kong, Karen kho, khang, Toung-thu khan, Anam kon, kang, Kami a-kho, Kumi a-kok, a-kauk, Mro khouk, Khyeng ka-ko, Dhimal kho koi, Anam chen, kon, kang, Kambojan chong, Mon chang.

2. Garo cha-p-lap (cha-kreng *hand*), Lhopa kang-lap.

The Naga cha, tchya, da, ta-ching, ta-chang, ta-tsuong, Khyeng ashi, Doing-nak teng, Sak a-tar, Lau fam, tin, ten, Mon thsilu, Lepcha diang-liok, have the root used for *hand*. The Nogaung ta-tsuong *foot* is faithful to the Chinese tsu, tsuk *foot*. The Lau and Mon forms appear to be of Naga derivation.

Mulung and Tablung yah-lan (yak-lan *finger*, yak *hand*).

Garo ja-chok, chap-lap (chak-reng *hand*, le-chak *leaf*).

Taying Mishmi *m-grung*, *m-gruh*, Burman khre, k^hye, Kivanti *u-khuro*.

Mijhu Mishmi *m-p-la*, Abor *a-le*, Singpho *la-gong*.

Murni *la-le*, Newar *pa-li*, Gurung *bha-le*, Magar *mi-hil*, Sunwar *kh-we-li*.

The Tibetan *lag hand* is found as *foot* in Aka laga, Lepcha diang-liok, Limbu lang-daphe, Murni *la-le*.

4. Angami *a-phi*, *u-phi*, Koreng *cha-pi*.

Maram, Songpu, Luhappa phai, Champhung *a-phai*, Bodo ya-phai, Khoibu wang, Kyau pat.

Bone.

The old Bhotian *rus-pe* is found in Takpa *ros-pa* and without the suffix in Magar, Sunwar and Chepang. The current *ru-ko* is found in Manyak *ru-khu* and Manipuri *a-ru-han*. The Gyarung *syu-rhu* is also Manipuri *sa-ru*. The Lau duk, nuk is probably referable to the Manyak form.

NAMES OF FAMILY AND SOCIAL RELATIONS.

The small vocabularies only contain the names for *Man*, *Father* and *Mother*.

Man is *mi* in Bhotian, *mi'* in Takpa, and *tir-mi* in Gyarung. Horpa has *v-zih*, Thochu *ni*, and Manyak *chhoh*. It is probable that the Horpa *zih* is masculine and not generic, as it occurs with a masc. power in the Manyak *nga-zi* and Thochu *zyah bull*. *Mi* is common in the Ultraindo-Gangetic vocabularies.

1st, generically, as in Bhotian and Gyarung, varying in form to *bi*, *wi*,—e.g. Newar *mi-jang man*, *mi-sa woman*, Burman *sa-mi girl*, Singpho *si-wi girl*, Garo *mi-chek wife*, Miri *mi-yeng wife*, *mi-mo woman*, Bodo *bi-hi wife*, *bi-ma mother*.

2d, with a feminine application. Kasia *mi mother*, Khamti *me girl* (Dhimai *be-jan boy*). Mishmi *mia woman*, Siam *tua-mi fem. of animals* (*tua-po males*), Mishmi *k-mai woman*, Anam *mai, fem. of birds*, Mikir *a-pe fem. of animals &c.*

The sibilant has a masculine application in the Bodo *bi-shai husband*; Siamese *chai*, Khamti *sau man*; Kumi *tehau man*, Pwo Karen *p-sha man*. The N. Tangkhul *pa-sa* and Kasia *pen-so man* is probably also masc. and not generic. The Manyak *chhoh* is a cognate root, (comp. *cho* Ostiak).

The Thochu *ni* is Chinese *nan*, *nen*, *man* (*vir*), *lang husband*. The root occurs with the masc. power in the Bhotian *pa-la father* and it is very common in the Ultraindo-Gangetic vocabularies as a masculine root and servile, both for man and the inferior animals.

The word for *father* is *pha* in Bhotian *wr.*, *pa-la sp.*, *a-pa* in Horpa, Manyak and Takpa, *ta-pe* Gyarung and *ai* in Thochu. That for *mother* is *a-ma* in Bhotian, Horpa, Manyak and Takpa, *to-mo* in Gyarung and *ou* in Thochu. The Bhotian masc. and fem. roots, postfixes and prefixes in *b*, *p*, *v* and in *m*, are the same words as those used for *father* and *mother*. In the southern vocabularies they are almost universal with similar meanings and functions, and with various changes of form. In several of the dialects they are now definitives absolute as in Bhotian. The masc. application of *ba*, *pa*, *fa*, *va*, *bi*, *be*, *bo*, *bu* &c. and the fem. of *ma*, *mo*, *mu*, *mi*, *me*, &c. is common to most formations in the world, and must

have been coeval with the beginning of human speech. [See App. *Father*, *Mother*]. In some families, however, *m* is masc., and *b* &c. fem. [See Dravirian Comp. Voc., App. to chap V].

The Tibetan *mi man* is probably connected with the Scythic masculine root of the same form, generic words for the species being generally cognate with masc. and not with fem. roots. Ugrian has *mis*, *mes*, *maz*, *man* &c. for *husband*, *man*.

The peculiar Thochu words *ai Father*, *ou Mother*, are Scythic,—*ai Father* Ugrian, *aua Mother* Turkish.

The Chinese *nu*, *neu*, *na*, *woman*, *female*, does not appear to occur in the Tibetan vocabularies, but it has been received into several of the Ultramindian. Gerard however gives *ane* Bhotian.

The Chinese fem. *tsi*, *tsz* (confined to Birds in Kwan-hwa) is found in Horpa *s'-me girl*, and is common in the south.

MASCULINE NAMES.

1. The Labial Root

<i>mau</i>	<i>male</i>	Chin. K-h, <i>ib.</i> (<i>cattle</i>), K-t.
<i>fu</i>	<i>father</i> , <i>husband</i>	K-t., K-h.
<i>phu</i> , <i>pu</i>	"	Anam
<i>phu</i>	<i>man</i> (<i>vir</i>), <i>husband</i> ,	Siam.
<i>pho</i> , <i>po</i>	<i>male</i>	Bhot. sp.
<i>la</i>	"	"
<i>pha</i> , <i>pa</i> ,	<i>father</i> , <i>male</i>	Bhot. wr.
<i>pa-la</i>	<i>father</i>	Bh. sp.
<i>a-pa</i>	"	Bhot. wr., Horpa, Manyak, Takpa, Lhopa, Murmi, Kapwi, Maram, N. Tangkhul, Muthun, Joboka; Mon.
<i>ta-pe</i>		Gyarung.
<i>po</i> , <i>pho</i>	<i>father</i>	Lau fam.
<i>a-pok</i>	"	Kambojan.
<i>a-po</i>	"	Mozome Angami.
<i>a-pu</i>	"	Songpu, Koreng, Tengsa, Angami.
<i>am-po</i>	"	Kumi.
<i>i-bo</i>	"	Champhung.
<i>bo</i>	"	Khyeng.
<i>ba-bu</i>	"	Abor.
<i>a-bu</i>	"	Newar.
<i>a-bo</i>	"	Lepcha, Gurung.
<i>thong-po</i>	<i>male</i>	Changlo.
<i>sing-pho</i>	<i>man</i>	Sing-pho.
<i>pong</i>	<i>male</i> (<i>an.</i>)	Namsang, wa-pong pat. uncle, Mijhu.
<i>i-pho</i>	<i>brother</i>	"
<i>pol</i>	<i>man</i>	Kumi.
<i>tua-phu</i>	<i>male</i> (<i>an.</i>)	Siam
<i>wa</i>	<i>father</i>	Singpho.
<i>va</i>	"	Jili, Namsang, Dhimal.
<i>pa</i>	"	Sgau Karen, S. Tangkhul, Koibu, Mru, Kasia, Chepang.
<i>u-pa</i>	"	Nogaung.
<i>o-pa</i>	"	C. Tangkhul, Tablung.
<i>o-pah</i>	"	Mulung.

pa-pa	<i>father</i>	Maring.
pha	"	Pwo Karen, Toung-thu.
ka-pha	"	Lung-khe.
pha-ai	"	M. Kumi.
pha-e	"	Burman.
z-pha	"	"
pa-ei	"	Kami
bai	"	Magar.
a-pai	<i>mule</i>	Mijhu M. (fowl).
ke-pai	<i>father</i>	" "
u-pha	"	Garó.
a-bha	"	Mrung.
a-va	"	Luhuppa.
na-ba	"	Taying.
a-ba	"	Aka, Sak, Toung-thu, Serpa.
am-ba	"	Limbu.
ba	"	Kiranti; Kyau.
ba-ve	"	Sunwar.
bi-pha	<i>mule</i>	(an.) Garó.
ba-ha	"	Miri.
pha	"	(birds) Burman.
wa-jan	<i>boy</i>	Dhimal.
mi	<i>man</i>	Kuki.
n-mo	"	Taying.

2. *The Liquid Root.*

nan	<i>male</i>	Chin. K-h., K-t.
nen	"	" Shang-hai.
rin	<i>man</i>	" Gyami.
lang	<i>husband</i>	Chin.
nam	<i>mule</i>	Anam.
nd	<i>man</i>	Thochu.
pa-la	<i>father</i>	Bhot.
la-sya	<i>son</i>	Singpho (sya daughter).
de-la	<i>husband</i>	Namsang.
je-la	<i>mule</i>	(an.) Bodo, ta-la (fowl) Taying.
la-go	"	Changlo (prob. lag-o).
dan-kha	"	(an.) Dhimal.
ma-ran-ma	=	M-yan-ma, M-ya-ma, Ba-r-ma
p-ra	<i>man</i>	Karen.
ph-lai	<i>male</i>	(elephants) Siam.
t-rai	"	Anam.
k-lung	<i>man</i>	Khyeng.
ka-ren	"	" [= Kh-yeng].
mi-jang	"	vir, Newar (mi-su woman).
lan	"	Toung-thu.
Ta-lein	=	Mon.
leng	<i>husband</i>	Burm.
len-ja	<i>mule</i>	Magar.
nga-long	<i>man</i>	Mijhu.
ka-ru	"	Mon., male Taying.
k-ru	"	Mon.

k-loun	<i>man</i>	Karen.
mi-lo	<i>husband</i>	Miri.
ni-o-lo	"	Daphla.
k-loe	<i>man</i>	Ka
lu	"	Burman, Sak.
m-ru	"	Mru (= N-ru).
nu-ru	"	Sanwar.
na-ro	"	Lepcha.
ruot	<i>father</i>	Anam
loh	<i>male</i>	(small an.) Kumi.
lu-hi	"	(birds) "
t-rong	"	" Anam,
Si-long	=	si-long
nguoi	<i>man</i>	Anam
nhon	"	"

dagh-po	<i>husband</i>	Bhot. (Gerard).
jako	"	(Rob.).
dach	"	Milchanang.
chagha	"	Tiberkhad.
lago	"	Changio.

3. The Sibilant Root.

e-sh	<i>man</i>	Horpa.
ehhó	"	Manyak.
chong	"	Anam
á-tchong	<i>man</i>	Mijhu

chai	"	Siam
sau	"	Khamti
tehim	"	Kumi.
cha	<i>father</i>	Anam
di-shai	<i>husband</i>	Bodo.
jik-se	"	Garó.
tho	<i>male</i>	(many an.) Burm.
thi	"	"
thuk	"	(an.) Khamti.
duk	"	" Anam.
p-tung	"	(large an.) Kumi.
pa-se	<i>man</i>	N. Tangkhul.
pen-se	"	Kasie.
me-se	"	Si'ong.
siah	<i>father</i>	Anam
da	"	"

4. The Guttural Root.

kang	<i>male</i>	Chinese K-h., <i>ib.</i> (an) K-t.
kang	"	(inanimate) "
lung	"	(birds) K-h.
hiung	"	" K-t.
yiung	"	" Shang-hai.

kée'n	masc. principle in nature Ch.
khon	vir Siam

a-gu	male, father, Bhot. (Gerard).
{ ja-ko	husband Bhot.
cha-ga	" Tiberkhad.
ji-k-se	" Garo (mi-chek wife, chek=jik generic).
u-gu	paternal uncle Bhot. (Gerard).
a-ku	" Tiberkh., Mileh.
kea	father " Tiberkh.
s-keo	male Mileh.

FEMININE NAMES.

1. *The Labial Root.*

pan	female Chinese K-t.
pin	" (an.) K-h.
mu	" (an.)
fu jin	woman. Chin.

ma, mo, m	fem. part. and pref. Bhot.
a-ma	mother Bhot., Horp., Many., Takp., Dhim., Gero, Gurang.
ta-mo	" Gyarung.
mo-b-jye	wife Bhot.

da-mo	fem. Changlo (Gyar.).
moi-bo	wife "
vo	" Anam
mi-mo	woman Miri.
ma	fem. (an.) Burm.
bi-ma	" (an.) Garo.
"	" mother Bodo.
ma-pani	fem. (an.) Dhim.
phang	" (elephants) Siam.
ban	wife Siam
don bu	woman Anam
a-mi	mother Burm.
mi	" Kasia.
me	" Lau sam. Anam
mia	wife Siam
tua-mia	fem. (an.) Siam.
mia	woman Taying M.
be-jan	girl Dhim.
a-pe	fem. (an.) Mikir.
a-pi-so	wife "
na-bi	elder sister Taying (na-fo elder brother).
si-wi	girl Singpho.
man	mother Anam
k-mai	fem., woman, Mijhn.
mai	fem. (birds) Anam.
mei-ma	fem. Burm.
a-pu	mother Tengsa.

na-mu mother Abor.
 na-ma " Taying

2. *The Liquid Root.*

nü fem. Chin. K-t. K-h.
 neu " " " "
 na " " K-h.
 nu woman Anam

ə-ne mother Bhot. (Gerard).
 ɛ-ne " Aka.
 e-nu " Naga, Manipuri gr.
 o-nu " "
 nu-nu " Mijbu
 noa " Manipuri.
 num-sya " Singpho.
 num-sa fem. " "
 nu " (an.) " , Kumi.
 nang woman Siam
 na-na mother Miri.
 ne-ka fem. (an.) "
 mi-eng wife, girl "
 ing fem. Siam.
 ing-yong mother Namsang.
 n-yong fem. (an.) "
 ing-yah sister "

3. *The Sibilant Root.*

tsi wife Chin. K-t.
 tsai " " K-h.
 tsz fem. (birds) K-t., K-h.
 s'-me girl Horpa.
 ns-res woman Gyarung.
 an-cho woman Bhot. (chho' man Many.).
 a-zhim sister elder Bhot.
 sing-mo " younger "
 jo fem. (an.) Dhim.
 jong mother Mikir.
 hi-n-jo woman Bodo.
 mi-chek wife Garo (jik-æ husb.).
 the " Anam.
 za-si fem. (an.) Taying.
 si-wi girl Singpho (? si-wi, comp. sing-pho).
 hi-hi wife Bodo.
 hi-njo woman "
 sya daughter Singpho.
 sa-mi girl Burman (s'-me Horpa).
 mi-sa woman Newar.

4. *The Guttural Root.*

kwan Chin. K-t. (fem. principle in nature).
 ka fem. def., Kasia.
 gai woman Anam.

kai	fem.	(an.) „	
			5. <i>Vosalia.</i>
yang	Chin.	K-t. fem.	principle in nature.
ying	fem.	Khamti.	
mi-yeng	wife	Miri.	
m-eng	„	Ahor.	
ing-yong	mother	Namsang.	
ing	fem.	Siam.	

NAMES OF DOMESTIC AND OF SOME WILD ANIMALS.

The names of the more familiar quadrupeds, domestic and wild, are more or less connected in all groups of language that retain a primitive and homogeneous character. The same root has been applied to several of these quadrupeds as a generic name, the species being denoted by a definitive, or a qualitative, or by the addition of a second substantive name. In the progress of dialectic separation and change, the same pure root, or the same compound, has come to be applied to different animals in the various dialects; vocables originally identical have acquired distinct forms and applications by phonetic changes in one or more of their elements, principal or accessory, or by throwing off the latter; and, on the other hand, vocables originally dissimilar have acquired a close resemblance. Roots primarily denoting only the sex or age have acquired a substantive character and become restricted in particular forms, to certain animals. Thus words that first signified man, woman, child, were applied to mark the sex and age of the lower animals; and in some cases, by the loss of the substantive names which accompanied them and by the acquisition of peculiar phonetic forms, they eventually superseded these names, so that the same root may, in the same dialect, mean not only man and the male of a lower species, but the species itself, male and female. By the loss of the specific name and the permanence of the descriptive, the same animal may acquire distinct names not only for male and female, and for the young of different stages, but for other varieties in breeds or individuals,—as those of size, form and colour. Thus while a single root sometimes continues to be applied—joined with descriptive words or slightly varied phonetically—to animals of different species, the varieties of the same species, and even diversities in the same breed, may be known by distinct roots. Secondary forms and applications have been communicated by one dialect to others, so that while, on the whole, the general glossary of each group has, by the lapse of time, gained in richness and individuality, while preserving the primitive stock of roots, each single vocabulary has become less homogeneous and systematic in its nomenclature, and has even lost some of the archaic roots or compounds. To ascertain the radical stock of names and the primitive method of applying them we must consider the glossary in the aggregate. To ascertain the relations of particular dialects we must consider each departure from the archaic system as a substantive historical fact. [See chap. V. sec. II, *Names of Parts of the Body*, p. 208, *Names of Domesticated Animals* p. 240].

Dialectic relations can only be fully understood by comparing words in groups, comprising all those that are etymologically related. But to form such groups with accuracy demands the perfection of a science which can hardly be said to have yet taken a definite shape. We must be in

complete possession of all the dialects of the family, and we must have compared all their vocables not only with each other but with those of the cognate families,—that is with all other human languages. The history of every spoken tongue ascends to the very beginning of speech, or to the origin of mankind. It contains roots that have come down through numerous channels and with various changes of form and meaning. Each root has also, through all ethnic time, flowed in hundreds of contemporaneous currents, multiplying by self division, diverging far apart, approaching, touching or coalescing, and again divaricating. The genealogy of every language is hence exceedingly complicated, and will remain a subject of research for centuries to come. We must make a beginning with imperfect vocabularies, and such partial groups as they enable us to determine. The results which the first labourers in the field may arrive at will appear insignificant as the science advances; but they have this encouragement that every well considered comparison, however narrow, leads to a positive historical result. What is learned is a substantial and stable gain. It will afterwards take its place as only one among many evidences of the same ethnic movement or influence, or internal linguistic change; and connections that now appear isolated or partial will be explained as the results of ethnic alliances and events that were not at first suspected, but which have left other records in the vocabulary. The earlier generalisations will be corrected when they have been too narrow or too wide, but the substantial affinities brought to light will always remain among the facts on which the science, in all its successive developments, will be based.

With the small samples which we possess of most of the Himalaic languages, we must be satisfied with the examination of a few groups of words, and each of these exceedingly defective. Not to complicate the enquiry, it will be confined to ascertaining 1st, the ramifications of each root in all the vocabularies; 2d, the vocables by which each object is at present known in the different vocabularies, and the connections thereby indicated; 3d, the affinities of each vocabulary singly. The relations indicated under the first head are to a great extent archaic: they must have been formed during a great lapse of time; and many of them must belong to the earliest phase of human speech. The history indicated by these affinities is complex and must embrace many and great ethnic changes and movements. The affinities examined under the 2d head will throw some light on the later ethnic movements; and those brought together under the 3d will help to show to what extent each dialect was affected by those movements, and what its modern and its later pre-historical relations to the other dialects have been.

As the Chinese is, on the whole, more faithful to the primary system of nomenclature than other languages, and the Himalaic family takes the next place in the order of glossarial disorganisation and concretion, it will be useful to take a few illustrations from Chinese of the use of generic names. The root *ngau*—dialectically varied to *gu* on the guttural side and to *niu* on the liquid—is applied, with specific qualitives, to the *Cow*, *wong ngau* (*yellow ngau*), *Buffaloe*, *shui ngau* (*water ngau*), *Yak*, *man ngau*, *Zebu*, *fung ngau*, and *Rhinoceros* *sai ngau*. The root *yeung* (*yang* &c.) is applied to the *Sheep*, *min yeung*, *Goat*, *shan yeung* (*mountain yeung*) or *tsu* (*tsau* &c.) *yeung*, *Chamois*, *ling yeung*, and *Antelope*, *gutturusa wong yeung* (*yellow yeung*).

The root *shu* is applied to different kinds of *Rats* *lo shu*, *chuk shu*, *tsong shu*, *ku shu* &c., and *Mice* *shik shu*, *tsu shu* &c., to the *Squirrel* *sung shu* or *wong shu*, to the *Weasel* *yau shu*, to the *Mole* *tin shu* or *an shu*, to the *Marmot* *put shu*, and to the *Bat* *ti shu*.

The following appear to be the roots now current in the Tibetan vocabularies in the names for the *Cat*, *Dog*, *Hog*, *Goat*, *Monkey*, *Cow*, *Buffaloe*, *Elephant*, *Horse*, *Tiger* and *Monkey*, the names of other quadrupeds not being contained in the short Sifan lists.

1. (a.) The labial with a slender vowel, *mi*, *bi* or *byi*, *pi*, *me'*, is an element in the names for the *Cat* in Bhotian (*Sokpa* and *Takpa*), for the *Cow* in Horpa and Manyak, and for the *Buffaloe* in Manyak. The Horpa *me'* suggests that it may, in an older form, have had a guttural final. The Thochu *pi Hog* may be a slender Sifan variation of the prevalent *phag*, *pha* &c., like *ri* *round* for the Bhotian *lam*, *bri* *snake* for the Bhotian *brul* &c. (see Sec. 2), so that it cannot be considered as a fourth application of the archaic slender root.

(b.) The aspirate labial with the *a* vowel is applied to the *Hog*. It preserves a guttural final in Bhotian, but has lost it in Horpa, Manyak and Takpa,—*phag*, *phak*, *pha*, *vah*, *wah*.

(c.) Another broad form is applied to the *Cow*—*ba*, *pha*, *wo*—in Bhotian, Takpa and Manyak; and to the *Horse*—*bo*—in Gyarung and Manyak.

(a.) *Cat*. *byi-la* Bhotian wr., *si-mi* Bhotian sp., *Sok-pa*, *syi-m-bu* Takpa (-*bu*, the Bhotian masc. postfix as in the Bhot. *pre-bu monkey*). Comp. *hi-thi rat* Bhot., *pi-chru-ba* Changlo.

Cow. *ngau-me* Horpa, *wo-mi* Manyak. *Hog*, *pi* Thochu.

Buff. loc. *ding-mi* Manyak. The word is not given in the other Sifan vocabularies.

[*Tiger*. *le-pho* Manyak (Chinese *lo-fu* &c.).]

(b.) *Dog*. *phag* Bhot. wr., *phak* Bh. sp.; Horpa *vah*, Manyak *wah*, Takpa *phu*.

(c.) *Cow*. *ba* Bh. wr., *ba'* Takpa. *pha-chek* Bh. sp., *wo-mi* Manyak.

Horse. *bo-ro'* Gyarung, Manyak, *bo-ro'* Manyak.

Chinese has *mi* *stag*, *ti* *colt*, *ma* *horse*.

II. The liquid root occurs in names for the *Cat*, *Goat*, *Cow*, *Buffaloe*, *Elephant* and *Horse*.

Cat. *byi-la* Bh. wr., *chu-la* Horpa, *lo-chi* Thochu *ta-rhu* Gyarung.

Goat. *ra* Bh., Takpa.

Cow. *sa-lo* Sok-pa, *lang dang* Bh. (Rob.), *lang-gu* *bull* (Pitti), *pa-lang* *cow* (*ib*).

Buffaloe. *ding-mi* Manyak.

Elephant. *g-lang-chen* Bh. wr., *lam-bo-che* Bh. sp., *lha-bo-che* Sokpa, *la-ma-che* Horpa, *lang-chen* Gyarung, Takpa. The second element in the compound is Chinese. The native term *lang* is obviously that used for the *Cow* and *Buffaloe*, the Chinese name being added as the specific one or qualitative, or conversely.

Horse. *chi*, *ryi* Horpa, *ma-ri* Sokpa, *ro'* Thochu, *bo-ro'* Gyarung, Manyak, *bo-ro'* Manyak. [Chinese has *lu*, to *ass*, *lau hu*, to *fu tiger*, *lau shu*, to *shu* *rat*, *luk*, *lu* *deer*, *lok*, *loh* to *camel*].

III. The sibilant and dental root is applied to the *Cat* si, syi, chi, chu, chea. *Goat* chhe, tsah, so, cha, chang, *Cow* chuk, *Bull* zyah, zi, *Dog* sha, ta', *Horse* ta', *Tiger* tak, te.

A. The sibilant.

Cat. si-mi Bh. sp., (syi-m-bu Takpa), chu-la' Horpa, lo-chi Thochu, ma-cheu Manyak.

Goat. chang-ra Bhot., chhe Horpa, tsah Thochu and Manyak, *ku-so* Gyarung, cha-pu, chya-pu (the goat of "the northern region of the sub-Himalayas" Hodgson, J. B. A. S. XVI., 1920).

Cow. phu chuk Bh. sp.

Bull. zyah Thochu, nga-zi Manyak.

Dog. k-sha' Manyak. This appears to be a variation of the dental found in Horpa *ka-ta'*.

B. The dental.

Horse. r-ta Bh. wr., ta sp., te' Takpa.

Dog. ka-ta' Horpa, k-sha' Manyak.

Tiger. s-tag Bh. wr., tak sp., s-tak Horpa, téé Takpa.

IV. The guttural and nasal roots are applied to the *Dog*, *Hog*, *Tiger* and *Cow*, and appear to be all Chinese in their immediate affinities.

Dog. khyi Bh. wr., uyo sp., khwa Thochu, khi Gyarung, Takpa, (Chinese kien, hun, kau, keo, Pin koi-ra &c., Mongol nho-khwe, na-koi &c.

Hog. ki Gyarung [? chi, ti, tio, chu, tu, du Chinese].

Tiger. khó Thochu, kong Gyarung, [khu Gyami, hu Chinese].

Cow. gwa Thochu [? Chinese ngau, gu].

Cow. ngau-mé Horpa, nye-nye Gyarung. Chinese K-t. ngau. K-h. niu Hok-kien gu; *cow* hwang niu, wong ngau, wong ngiu, (hwang, wong, wong, yellow) &c.; *bull* mau niu, niu ku, ngau ku, ngau kung &c. (mau, ku, lung, male); *buffaloe* (water-cow) shui niu, shui ngau.

The occurrence of the same root as an element in different names, and its change of position from initial to final, is, in several cases, explained by its possessing, or having primarily possessed, a sexual power. The labial retains its sexual power in Tibetan. The sibilant is masculine in its application to the *Bull* in Thochu and Manyak. The liquid does not appear to be current as a masculine root in Tibet, but it is preserved in Bhotian pa-m *Father*, and in the southern languages of the family it is common in the Tibetan forms lung, ra, ro, ri &c., as a masc. substantive or servile. On comparing the Tibetan names of animals in which it occurs with the southern ones, it is clear that it must originally have been a masc. root in Tibetan. Hence byi-la, chu-la, lo-chi *cat* and chang-ra *goat*, are radically masc.; while si-mi, ma-cheu *cat*, wo-mi *cow*, are radically fem. In Tibetan the sex qualitative may either precede or follow the substantive word. In the course of that glossarial metamorphosis to which language is subject, the sex name has, in several instances, become a substantive one, *Bia*, *wo* and *lung* are now *Cow*, *ra* *Goat*, *chu* *Cat*, *phag* *Hog*, and *ding* *Buffaloe*. With the light thus thrown on the Tibetan names we can proceed with more certainty to examine their history and relations.

I. The labial is one of the primary zoological roots. It is also prima-

ry in Scythic, and with a similar range of application. *Cat*, Turkish *mi-shik*, *pi-shik*, *ma-chi* &c., *Ostiak mi-sak*, *Mongol mi-choi*, *mi-i*. That this was a very archaic application—perhaps the earliest, unless the *mouse* was the first of the house quadrupeds (*pipi*, *mush*, *mus*, *pisse* &c. &c.)—is shown by the prevalence of the same root, and of the same combinations, in other families, including Semito-African *bi-s*, *mus* &c., Caucasian and Pashtu *pish-ik*, and Dravirian *pi-shi* &c. (See chap. V. sec. 11, CAT). Similar vocables for the *mouse* are as widely spread; and these for the *dog*, *goat*, *sheep* and *cow* are the same (e. g. *cow* Ugrian *mis-ye*, *mes*, *mus*, *wys* &c.). It is much more probable that the root was extended from the smaller to the larger animals than the reverse. The order was probably from the mouse and rat to the cat, and then to the dog, goat, sheep, hog, cow, and buffalo, as they were domesticated. The mouse and rat would be the first quadrupeds to become inmates of human dwellings, and they would be the baits that first attracted the cat and the dog from their coverts and reconciled them to man's companionship.* The form and the free position of the Tibetan *mi* &c. in the different compounds in which it occurs, show that it is not a derivative from Scythic. It must be equally archaic in both branches of the Tibeto-Scythic stem. The ultimate source, or primary meaning, of the root appears to have been *man*, male or female. It was afterwards applied to the males or females of the lower animals. In the Bhotian *si-mi Cat*, Manyak *wo-mi Cow*, ding-*mi Buffalo*, *mi* has probably its feminine function. The Bhotian and Gyarung *mi Mun* is the same form of the labial. It is also Ugrian *mi*, *ma*, *mis*, *mes*, *mias*, *mas*, *muz*, *min*, *man*, *mar*, *mur*, &c., and in that family may also be the source of the similar names of domestic animals. The Bhotian *pha*, *pa*, *ba* &c. *father*, and *ama*, (*ma*, *mo* &c.) *mother*, have not only been applied to animals, to designate the sex, and thus originated substantive names, but have come to be used as definitives with inanimate substantives. The slender form is not current as a definitive in Bhotian, Horpa or Gyarung, but it is found in Thochu *-mi*, *-pi*, Manyak *-mi*, *-pi*, *-bi*, Lhopa *-be*, and in Gangeitic dialects.

The Bhotian *byi* of *byi-la Cat* although primarily identical with the servile sexual *bi*, *mi* &c. has evidently had a distinct history. It presents itself as a root used substantively for the Cat, and that this application was very archaic appears from its being found both in the Chinese glossary and in that of the Scythic, and most of the other Asiatic formations. *La* appears to be the masc. liquid root used postfixally as in *pa-la father*, *chang-ra goat*, *chu-la cat*.

Ba, *Cow*, is the same root as the *pha* in *pha chuk*. Serpa has *ma chu*. *Ba* or *pha* and *ma* are identical with the Bhotian sexual labial definitives and postfixes, *pa*, *ba*, *po*, *bo* &c. masc., *ma*, *mo* &c. fem.

In the Lhopa dialect of Bhotian *bha* is the *bull*, *lang* the *cow*; the compound *ba-lang*, *pa-lang* is used in some dialects for the *cow*. In *lang-bo-che*, *elephant*, *lang* takes the masc. postf. The *wo* of Manyak is also radically the same masc. def. It has the same form in Thochu as a postfix, *mar-wo Bird*, *nyag-wo Crow*. Bhotian has *bo*, *vo*, *pho*, *po*.

* I have found a somewhat similar remark in Admiral Schischkoff's *Vergleichendes Wörterbuch* ii., 224.—Referring to the identity of some widely prevalent names for the Cat, Dog, and Mouse, he explains it by saying that they must have been the first domestic animals.

Both *ba*, *pha*, or *wo* and *lang* must have been originally applied as qualificatives to the *bull*, with or without another substantive root conjoined. It is probable that *chuk* preceded them as the substantive and that *chuk*, *ba*, *chuk wo*, *chuk lang*,—or *ba chuk*, *wo chuk*, *lang chuk*,—were current like *pha chuk* and *nia chuk*.

The broad form of the labial root for *Man*, *ba*, *pa*, *wa*, *wo*, *bu* is a very common one in the zoological vocabulary, with different applications, and with or without a final consonant, *s*, *l*, *k* &c. It has frequently a masculine application, both when used for the bull and ox, and for the males of other quadrupeds. It is applied to the *Bull* in Scythic, *buga*, *buka*, Indo-European *buka*, *bugu*, *buk*; *wol*, *wul*, bull: *bus*, *bos*, *bu*, *be*, *wo* (Scythic *mus*, *mis*, *wo-gol* &c. &c.), and to the *Ox* in Circassian, *wwe*, *be*, *b'by*.

The Tibetan *phag*, *pha*, *wa* &c. *Hog*, is distinct in form from *mi* and *byi*, and is evidently a very archaic variety of *pa*, *la* &c. The labial does not appear to retain a similar form with the same application in the glossaries of the other great families, but it is still current for the *goat*, *sheep*, *ox*, *deer* &c., in Scythic, Indo-European, Semito-African &c. and it is frequently applied to the male. It is not Chinese in any of these applications, and it therefore belongs to the Scythic side of the basis glossary, but without being a derivative from Scythic. It is one of the distinctive archaic vocables of Tibetan. Its relations to the examples of the same root found in other families will be considered when the Ultraindian forms and applications have been given.

II. The liquid root is one of the primary or most archaic of the Tibetan, and hence enters into many animal names. It appears in the form *lang*, *la* to have become one of the proper native words for the *Cam* and to have been afterwards applied to the *Elephant*; in the form *ra* it has become a substantive name for the *Goat*; and in the form *rlu* for the *Cat*. A different form of the same root, or a primarily distinct liquid root, appears to be the native term for the horse *ró* (probably a softening of *rok*), *rli*, *ryi*.

This root has also a masculine application. Its primary meaning is *man*, *male*, and it occurs extensively in the China-Himalaic vocabularies in masculine terms,—*man*, *husband*, *father* &c.,—and as a masculine definitive with the names of animals, in various forms, *nan*, *lang*, *leng*, *la*, *lu*, *lo*, *long*, *log*, *ru*, *ling*, *ri*, *ren* &c. The Bhotian word for *father*, *pa-la* adds it to the labial root of old Bhotian. In *chu-la'*, *lo-chi* *Cat* and *chang-ra* *Goat* it has probably the same function. It is a widely spread root for *man*,—Chinese, Turkish, Mongolian, Semitic, African and Dravidian-Australian.

The more immediate affinities of the root in its application to the *Cam* are found in the Ugro-Semitic band. Fin *Cam* *loh*, *loch*, *leh*, or, *er*, *la*,—*loh-ma*, *loch-ma*, *leh-mu*; Caucasian *Ox*, *her-ga*, *hor-g*, or-*j*, or-*g*, *er-dse*, *hyer-ko*, Ugrian *yzh-la*, (comp. *ish*, *ysh-kuzh* &c.), *ok-or*, (comp. *uk-ys* &c.), Tungusian *or-gol* (comp. *gol* Turk.); Indo-European *aur-ochs* (*ochs* is Scythic), *ur-us*; Caucasian *ol*, *al* (Lesgian); Semito-Nilotic *lo-ti* *Gara*, *lahi-thin* *Mahrah*, *lahe-mi*, *la-me* *Tigre*, *la-m* *Amharic*, *Harragi*, *Gafat*, *lu*, *lo-ru*, *he-lo-a* *le-wu* *Agau*, *la-mo-wi* *Gafat*, *la* *Danakil*, *loh* *Saumali*, *lo-ni* *Galla*, *la-u* *Tumali*, *ai-ra* *Dalla*; *bull* *oura* *Danakil*, *Amharic*, *uhur* *Arkiko*. The Semitic form, as in so many other instances, must be directly connected with the Caucasian; and from the Lesgian *ol*, *al*, and the *Mahrah* and *Tigre* *lahi*, *lahe*, it is evident that this S. E. group

is more immediately connected with the Fin than with the Tibetan. In the Chinese, Scythic, Indo-European, Caucasian, Semitic and African families the prevalent names for the *Cow* contain different roots. The Tibetan name is therefore independent. The Fin *loch*, *loh* is a variety of an archaic form applied to the *Horse* in Ugro-Tibetan, and to the *Deer* in Chinese, and probably connected with Tibetan forms for the *Cow* only through the derivation of both from the same archaic Asiatic masculine root.

Ra *goat* (ra-ma *f.*, ra-ba *m.*) appears to be the same root. The word is only found in Bhotian. It is not Chinese. It seems clear therefore that ra was originally derived from *chan-ra*, a masc. form of the root *chang*.

The liquid root is applied to the *goat* in Semito-Nilotic languages, *harun* Mahrah, *a-ron* Gara, *ha-rar*, *ri*, *re* Galla, *illa* Danakil, *arre* Saumali, *araha* Bulanda, [*eru*, *eri*, *ere* Isoama &c. is probably a contraction of the com. African *e-wure*, *wuli*, *e-puri* &c.]; *arre* Saumali. But these names do not appear to have any direct connection with the Tibetan.

Ró *Horse* is Ugrian, and the guttural is preserved in Ostiak *log*, *loch*, *low*, (in other Ugrian languages *lo*, *lu*, *lyu*; *wol*, *wyl*, *wal*; *lowu*. The Ostiak guttural form corresponds not only with the Sifan *ró*, but with the Chinese *luk*, *li*, *ló deer*. In E. Tibet and Siling it is also used as a generic vocable for *sheep*, two kinds of which are known as *ha-luk* and *pe-luk* (Hodgson J. B. A. S. xvi, 1908). The root may also be contained in the Samiöde *ho-ra*, *Koria* *mol*, *mar*, Tungusian *mo-ro-a*, *mu-ri-a*, *mu-ri-l*, Mongolian *mu-ri-a*, *mo-ri*—this liquid form corresponds with the Horpa *rhí*. But in this prevalent Tartar term the liquid is either one of the common finals taken by monosyllabic roots in the Scythic family or it is a sex postfix, the root being *mo*, *mu*, cognate with the Chinese *ma*. In the Ugrian and Turkish *ala-sha*, Turkish *lo-sha* and Caucasian *uloh* (Misjeian), it may be a substantive root, as in the Ugrian *lo* &c.

From the occurrence of the liquid as a prefix or postfix in the human sex names and in several names of animals in Scythic glossaries, it is probably servile and masculine, or was so originally. *Man* Fin *al-maz*, *ul-muz*, Ugrian *lo-man*, *iri-golos*; *Husband* Fin *ol-ma*, *ul-ma*, *we-lo-man*, Mongolian *ere*, Turkish *ire*, *eri*, *er*, *ir*, *er-kek*, *er-in*, *ar-ini*; *Out* *ir-my-shak*, *er-gek-myi*, Turkish (so *ata-p-shik*, *ata* being *father*); *Dog* *koi-ra*, *koi-re*, *koi-ru* Fin, *ul-tschip*, *al-ship*, *il-tschap* (also *tschip* &c.) Yeniseian; *Ox* *or-gol* Tungusian.

If we consider the labial as the substantive root in the Scythic *mo-ro-a*, *mu-ri-a*, and *ro*, *ri* as masc. serviles, which in the Ugrian *og* &c. have become substantives, the same view must be taken of the Tibetan *bo-ró*, *ró*, which are thus placed in the same class with *pa-lu*, *pha*; *chang-ra*, *ra*; *chu-lá*, *lò-chi*, *chu*; and perhaps *r-ta*, if the Bhotian prefixal *r-*, *l-*, *s-*, *z-*, *h-*, *p-*, *r-* be, as is probable, contractions of the originally masculine definitives *la*, *ba*, *si* &c. As the form *ro* is no longer current in the southern Scythic languages, it must belong to the archaic Ugrian basis of Tibetan, like a large proportion of the other vocables. In the Ultrindian vocabularies the masculine liquid root retains the guttural final in several dialects. Indeed all the Scythic forms are found,—*ri*, *rin*, *ron*, *log*, *lok* &c.

III. The sibilant in its application to the *cat* appears to be archaic, and native. The root is found in Scythic vocabularies for the *Mouse* (e. g.

Turkish *shish*, *zis*, *shi* &c., in *shish-han*, *shi-han*, *shyshi* &c.), and a similar root is combined with the labial root in the Ugrian *me-tschik*, *ma-tska*, *mi-sak*, and Mongol *ni-choi* (also *mil*) *cat*.

In the Tibetan vocabularies (Horpa as well as Sitan) the sibilant root is the prevalent one for *goat*, *chung*, *chhe*, *tsah*, *so*. It is a common Seythie root, occurring in names for the *cow*, *horse*, *dog*, *hog*, *mouse* and *sheep*. It is doubtless applied to the *goat* also, but most of Klaproth's Seythie vocabularies omit the word. In other highly Seythie glossaries it is applied to the *goat*. It is the prevalent Caucasian root—*ze*, *tzia*, *etcha*, *chan*, *zu-ku*, *tu-ka*, *ze-ki*, *ka-za*, E. Caucasian; *ga-se* Misjeian, *b-zhen*, *zhi-ma*, Circassian; *tcha* Georgian, *sa-ga*, *sa-g*, *zan*, *zan-ek* Ossetic; Indo-European *zie-ge*, *chha-gal*, *chha-g*, *a-ja*, *chhe-lo*, *tsa-wul*; Semito-African *ne-ze*, *hi-se*, *e-ge-so*, *i-mi-shu*, *fi-za* [*fis*, *fus*, *sheep* Ossetic], *de-sha*, *sids*, *sikh*, *e-su*, *mbo-zi*, *si*, *si-na* &c.

The same root has as great a range in its application to the *cow*. The Tibetan *zyah*, *zi*, *chuk*, are Seythie in their immediate affinities. *Chuk* is Tungusian *chyu-kun*, *hu-kur*, *ku-kur*, Yeniseian *thu-ga*, *tu-k* &c. The root has the same application in the Ugrian *ish*, *osh* &c. *ov* [Indo-Eur. *ochs*, *ox* &c.], Mongolian *shar*, *zar* *bull*; Caucasian *is*, *os*, *ots*, *stu*, *ust*, *n-itz* &c.; Indo-European *ochs*, *ox*, *oss*, *osse* &c.

All the applications of the sibilant appear to be Seythie in their affinities. Chinese does not use this root for the *cow*, *goat* or *cat*. It is applied to the *Mare* *shie*, *she*, *Hog* *chu*, *chi* &c., *Musk deer* *she*, *Mouse* *shik*, *shu* (as in Turkish &c.), *Rat* *shu*, *chuk*; and in the same form to the *squirrel* and *weasel* with qualitative roots preposed. The Chinese *chi*, *chat*, *stallion*, appears to be the same root in its masculine Tibetan, Seythie, Caucasian and Indo-European application.

The dental root is, in many cases, the same as the sibilant, and has a similar range. As a name for the *Horse* the Bhotian *e-ta*, *ta* is cognate not only with the Turkish *at*, *ut*, but with the Chinese *shie*, *she*; Seythie *sha* of *ala-sha* (Ugro-Turk.), Indo-European *as-p*, *ash-va*, *tzi*, Caucasian *shu*, *shi*, *che*, *chak* &c., Semitic *sus*, *has-an*, *his-an*, African *cis*, *es*, *sy*, *si*, *su*, *so*, *dsu*, *e-si*, *e-dsi*, *a-shi*. The Bhotian *ta* appears to be an archaic form. It is found (reduplicated like *s* of the Hebrew *sus*) in the Dravirian and N. Indian *tata*, *tatu*. Exactly similar terms in *t* and *s* or *sh* are widely current names for the *dog*, *hog*, and *ov*.

The Horpa *ka-ti*, Manyak *k-sha*, *dog* correspond with the Turkish *eda*, *it*, *ot*, Koriak *a-tan*, *a-tar* &c., Kamtschatkan *ke-tun*, *ko-sha* &c., Aino *stah-pu*, Yeniseian *tzi*, *il-tscha*, *tship*, *tip* &c.

The Bhotian and Horpa *s-tag*, *tak*, *Tiger*, is a consonantal and probably more archaic form of the same root.

From this form, the abrupt accent of *ti* and *sha*, and the application of the root to the *dog*, *horse* and *tiger*, it is probable that the root was one of the primary ones of the Tibetan glossary.

Like the labial and liquid roots its primary application was also to *Man*, and most commonly in the sense of *Father*, *Progenitor* &c. It occurs in many families in reduplicated forms *tata*, *dada*, *titi* &c. In the Seythie vocabularies it is equally common with the labial root as the word for *Father*, Ugrian *isi*, *ese*, *ate*, *ata*, *tato*, *tatei* &c., Turkish *ata*, *ate*, *asio*, Mongol *etschi*, *etschi-ge* &c., Japan *titi*, *tsitsi*, &c. &c. The reduplicated Seythie form is also Indo-European and Zimbian. In the Himalaic family it does not appear to be one of the primary and prolific roots, but it occurs in

Horpa *v-zih man* and Manyak *chho' man*, which show the same variation from the palatal and broad to the purely sibilant and slender form that is seen in *chiu*, *cheu*, *chi*, &c. in the names of the *cat*, in *chang*, *tsah*, *so*, *chhe* in those for the *goat*, and in *zum*, *tyu*, *si* in those for the *monkey*. The broad form of Manyak is *Ostiak cho*, *choi*, but the normal Scythic form of *cho* is the guttural *ku*.

IV. The guttural and nasal roots do not appear to have been primary and prolific, unless *khi dog* and *ki hog* be both native, and the former only primitively connected with the Chinese.

From this general survey of the Tibetan names of the domestic animals, we infer that labial roots now having the forms *bi*, *mi* &c.; *phag*, *pha* &c.; and *ba*, *wo* &c.,—liquid, now having the forms *lang*, *la*, *lo*, *ra*, *ru*, *ro* *luk*,—sibilant and dental, now in the forms *si*, *chi*, *chu*, *cheu*, *chhe*, *chia*, *chang*, *tsah*, *so*,—and dental, in the forms *tag* or *tak*, *tá*, *ta*,—were among the primary roots of the family. Of these the earliest to acquire a specific substantive meaning appear to have been the labial *byi* in its application to the *Cat*, the labial *phag* in its application to the *Hog*, the labial *bo* in its application to the *Horse*, the sibilant-palatal in its application to the *Goat* and *Cow*, the aspirate-guttural in its application to the *Dog*, and the dental and aspirate in its application to the *Dog*, *Horse* and *Tiger*. The labial in its other applications, and the liquid, appear to have remained servile to a comparatively late period, and they probably still retain their sex function in most of the names in which they occur.

The primary roots connect the Tibetan or Himalaic family with the Scythic as dialects of one proto-Scythic monosyllabic glossary, distinct from the Chinese, but having also affinities with it. The separation between the Chinese and Scytho-Tibetan vocabularies must have taken place at a much more remote period than that of the separation of Tibetan from other proto-Scythic vocabularies. At the latter period several forms of the common roots had acquired specific applications, which they have retained in Tibetan and in several of the widely diffused Scythic and Scythoid vocabularies of the Old World. Others again are proper to Tibetan, and indicate the great antiquity of the separation. This is also proved by several of the common forms being best preserved by languages now widely removed from Tibet—as the *Ostiak*. In speaking of the period of separation it is not intended to limit the connection to one age. There may have been successive contacts between Scythic and Tibetan vocabularies in archaic as in recent ages.

The only name that may indicate an archaic connection with the Chinese nomenclature is the guttural root in its application to the *Dog*. The other radical Chinese names are different from the Tibetan. The names for the *Cow*, *Horse*, *Sheep*, *Cat*, *Hog*, *Tiger* and *Monkey* are quite distinct. A Chinese root for the *Deer* is the same as the Tibetan for the *Sheep*, but this is one of those primordial affinities that may rank with those of the pronouns.

The other Chinese names found in the Tibetan vocabularies are evidently intrusive and comparatively modern. Some have the forms of the ancient Chinese phonology, and some the emasculated *Kwan-hwa*. Like many other Chinese words in these vocabularies they prove that the Chinese race is that with which the Tibetan tribes have been longest and most intimately connected in the latest era of their ethnic history. Broad Chinese names for the *Cow* are found in all the vocabularies along with native ones, save

in Gyarung which has the modern or Kwan-hwa name only. The Chinese name of the *Elephant* appears to be annexed to a native root in all the dialects. The Chinese name for the *Tiger* is found in the gutturalised Gyami form of Kwan-hwa in Thochu and Gyarung, and in the old Chinese form in Manyak. The Gyarung name for the *Hog* and the Manyak name for the *Monkey* appear to be corruptions of the Chinese.

The 2d step is to examine the nomenclature of each animal, with a view to ascertain the extent of the dialectic divergency.

The *Cat* has five names, 1. *byi-la* Bhot. wr.; 2. *si-mi* Bhot. sp., Sokpa and Takpa; 3. *chu-lu'* Horpa, *chi-lo* Thochu; 4. *ma-chen* Manyak; and, 5. *ta-ru* Gyarung. In these names the sibilant substantive and the liquid servile are the most prevalent roots, and they connect all the dialects. Special connections exist between Horpa and Thochu, both possessing the substantive and qualitative roots combined in the same order, though differing in form; between Bhotian and Thochu in the slender form of the substantive; between Horpa and Manyak in its broad form; between Bhotian and Horpa in the a, and between Thochu and Gyarung in the o, u, of the servile. Old Bhotian in its use of the slender labial as the substantive, is peculiar, the Sokpa and Takpa being obviously derivatives from it.

The *Dog* has 2 or 3 names, 1. *khyi* Bhot wr., *khi* Gyar., Takpa, *khwa'* Thochu; 2. *uyo* Bhot. sp.; 3. *ka-ta'* Hor., *h-sha'* Manyak. Here also Horpa and Manyak, at the two extremities of the province, agree. Possibly *ta'*, *sha'*, is the primary Tibetan name, and *khi* &c, a later intrusive one of Chinese origin.

The *Hog* has 2 names, 1. *phag* Bh. wr., *phak* Bh. sp., *pha* Takpa, *wah* Horpa, *wah* Manyak, *pi* Thochu; 2. *ki* Gyarung; in which the connection between Horpa and Manyak is again illustrated.

The *Goat* has 2 names, 1. *ra* (the sex qualitative, for the substantive) Bhot. Takpa; 2. *chang-ra* Bhot., *tsah* Thochu, Manyak, *chhe* Horpa, *ku-so* Gyarung. The normal vowel is preserved by Bhotian, Thochu and Manyak. There are other instances in the vocabulary of Horpa affecting e and Gyarung o (and e).

The *Cow* is known by 6 names, 1. *ba* Bh. wr. (*pha* in 3), *bi* Takpa, 1 a. *wo-nu* Manyak; 2. *lang*, *ba-lang* Bh.; 3. *pha* *chuk* Bh. sp.; 4. *ngau-me* Horpa, *gwa* Thochu, *nga-ni*, *bull* Manyak; 5. *nye-nye* Gyarung; 6. *zya*, *bull*, Thochu (*n-ra-za* *bull* Manyak). For this important domestic animal 4 native and 2 Chinese names are current. The southern Chinese *ngau*, *gu* preserves the archaic broad form, to which the Horpa, Manyak and Thochu *ngau*, *nga*, *gwa* are referable. The softened Kwan-hwa *niu* is the original of the Gyarung *nye*, through the Gyami *neu*, *nyen*. The Chinese name is found in the Lhpa dialect of Bhotian, *ngo*, as the generic term, *ba* being confined to the male and *lang* to the female, from which it may be concluded that the Chinese name was at one time received into all the Tibetan dialects.

The *Elephant* is known by the same Tibeto-Chinese compound in all the dialects.

The *Horse* has 3 names, 1. *r-ta*, *ta* Bhot., *té* Takpa; 2. *bo-ró* Gyarung Manyak, *b-ró* Manyak; 3. *ró* Thochu, *rhí*, *ryi* Horpa. The remarkable fact here is that the Bhotian name should be exceptional.

The *Tiger* has 3 names. 1. *s-tag* Bh. *nr.*, *tak* Bh. *sp.*, *s-tak* Horpa, *tsé* Takpa; 2. *khó* Thochu, *long* Gyarung, 3. *le-pho* Manyak. Of these the Bhotian, Horpa and Takpa words are native. The Thochu and Gyarung are from the Gyiáni form *khu* of the aspirated Kwan-hwa ha, and the Manyak is a native slender form of the original Chinese *lo-fu* &c.

The *Monkey* has 3 names. 1. *s-jwe-bu* Bh. *wr.*, *she-pri* Gyarung, *pra* Takpa; 2. *tyu* Bh. *sp.*; 2 *a.* *zám-de* Horpa, 2 *b.* *ti* Gyarung, *war-si* Thochu,—the Gyarung having the Bhotian form.

The roots possessed by each dialect, and the relation of each to the others will be best shown in a table. I have added the names for *Fish*, *Snake*, *Bird*, *Crow*, *Ant* and *Mosquito*. (See next page).

From this table it appears that in the names for animals comprised in it, there is—when we exclude those of Chinese derivation—a close radical agreement in all the vocabularies, the variations being chiefly phonetic. The dialectic relations indicated are:—

1st, a very intimate one between Bhotian and Takpa, the latter adhering to Bhotian when the other dialects depart from it; and the difference being, in almost every case, merely a slight phonetic one. In its greater vocalic tendency Takpa partakes of the Sifan phonology.

2d, a connection between Bhotian and Gyarung, in the form of the roots for *Dog* and *Fish*, in the roots for *Monkey*, *Bird*, *Crow*, and *Ant*, and in the prefix in the words for *Monkey*, *Crow* (G. preserving the full form *tu*, Bh. has *a-*), and *Ant*. The connection is chiefly with the old or written Bhotian, the words for *Dog*, *Monkey*, *Bird*, and *Ant* preserving the old Bhotian roots or forms while the spoken Bhotian has lost them.

3d, a very slight connection between Manyak and old Bhotian. The Manyak *b-ru* *snake* like the Takpa *m-rui* preserves the vowel of the Bh. *b-rul*.

4th, an archaic separation between Bhotian and the other dialects save Takpa, as shown in the forms of several of the roots and prefixes. The special connection indicated under the preceding heads, if archaic, would be inconsistent with the early divergence indicated under this head. It is attributable to the dialect of the Bhotians having acquired more or less currency in the provinces of the other tribes, during the period when the Bhotians were predominant, and this must have been while the old phonology still prevailed. As illustrations of the archaic separation of the dialects, we may point to the different roots, or combinations of roots, for *Cat*, *Dog*, *Horse*, *Monkey*, and *Fish*, and to the difference of the prefixes in the Bhotic-Gyarung *y-rog*, *ko-rok*, Manyak *ba-ra* *Ant*, and in *s-b-rul* Bh., *kha-b-ri* Gyarung *Snake*.

5th. A special connection between Horpa and Manyak,—*Cat*, *Dog*, *Hog*, *Cow*, and *Crow*,—and the comparatively slight trace of such a connection between Horpa and Thochu (*s-kh-ro*, *tu-kh-ra* *Ant* being the only example), and between Horpa and Gyarung. As this special relation of Horpa to Manyak extends to some other substantive words, but not to the pronouns and the mass of the abstract and qualitative vocables, and as the Horpa are known to be adventurous and nomadic, being even now scattered over southern Tibet, it is probable that a Horpa horde at one period mixed with the Manyaks, and communicated to them a portion of their vocabulary. The intercourse of the Manyaks with the Horpa, however caused, appears to have been more intimate than with any other of the Tibetan tribes.

	Bhotian wr.	Bhotian sp.	Horpa	Theebu	Gyarung	Manyak	Takpa
1. Cat	hyi-la	si-mi	chu-lá	to-ehi	to-rin	ma chen	nyi-m-bu
2. Dog	khyi	nyo	ka-ta	khwa	khi	k-shai	khi
3. Hog	phag	phak	vah	pi	ki	wah	pha
4. Goat	ra	ra, chang-ra	chhe	tsah	ka-so	ts'ah	ra
5. Cow	ba	pha-chuk	ngau-mé	gwa	nyo-nye	wo-mi	ba
6. Buffalo	mahi	mahé	..	zyah (bull)	..	nga-zi (bull)	..
7. Elephant	g-lang-chen	lam-ba-chen	la-mé-chen	..	lang-chen	lang-chen	lang-chen
8. Horse	p-ta	ta	rhi, ryi	ro	bo-ro	bo-ro	té
9. Tiger	s-tag	tak	s-tak	khó	kong	bo-the	té
10. Monkey	s-pre-bu	tyu	zum-de'	wei-si	ti	mi-ya-lah	pa
11. Fish	nya	nga	hya	izhai	chu-nyo	yu	nga, nya
12. Snake	s-brul	den	phri	bri-gé	kha-bri	bru	mirui
13. Bird	byu	chiya	gya	mar-wo	nye-pye	ha	pya
14. Crow	kha-ta	ab-lak	ka-le	nyag-wo	ta-b-tok	ka-f	ak-pa
15. Ant	g-rog-ma	tho-ma	s-kho	ts'khra	ko-rok	ba-ra	thok-pa
16. Mosquito	san-bu	syé-dong-ma	t-ta-sa	be-yp	..	bi-mo	pho-té
	m-chu-ri ngs						

6th. The connection between the proper Sifan dialects is not very close; and they must have had distinct histories from a very archaic period. Each has well marked specialities. The agreement consists in a common, but not identical, softening of the Bhotian phonology, and in some common non-Bhotian roots and forms, as in the word for *Horse*. Thochu has a slight special agreement with Manyak,—*Goat, Bull, Mosquito*.

In conclusion it should be remarked that, in so far as each of the vocabularies has received vocables from Chinese or from a sister Tibetan dialect, during recent eras, the archaic glossarial relations amongst the different Tibetan dialects, have been disturbed and obscured.

All the Tibetan roots are found in the Southern vocabularies. They have the same forms, but variations are also prevalent,—some of southern origin, and others archaic. The roots have not only the Tibetan applications but others, which are also, in several cases, archaic. The connection with the Tibetan vocabularies not only embraces all those phonetic and glossarial phases which the existing Tibetan data have enabled us to discriminate, but others which are not now distinctly marked in Tibet, and which indicate the archaic existence of conditions of the Tibetan language and dialectic peculiarities which are now obliterated.

The labial root is applied to the *Cow* and *Hog* as in Tibet; and also to the *Cat* (Kambojan), and *Dog* (Lau). It has consonantal guttural and dental forms not only in names for the *Hog* as in Tibetan; but in names for the *Cow*, *bik*, *bit*, *Elephant* *puok*, *mag*, and *Horse* *puk*, *mok*.

The liquid is applied to the *Cat*, *Cow*, *Elephant*, *Goat* and *Horse* as in Tibetan; and also to the *Dog* (Mon), *Dog* (Mishmi) *Buffaloe*, *Tiger* and *Monkey*. It has not only the Tibetan forms *la*, *lang*, *ra*, *rô*, *lô*, *rhi*; but many others, *long*, *rong*, *ron*, *rung*, *rok* (i. e. the full form of *rô*), *ruk*, *rat*, *rak*, *lut*, *lok*, *luak*, *lak*, *dak*, *nak*, *rol*, *loi*, *ling*, *li*, *let*, *le*, *ren*, *re* &c.

The guttural is applied to the *Dog* as in Tibetan; and also to the *Goat*, *Tiger* and *Monkey*.

The sibilant, aspirate and palatal root is applied to the *Cat*, *Goat*, *Elephant* and *Monkey* as in Tibetan; and also to the *Cow*, *Buffaloe*, *Horse* and *Tiger*. It is not applied to the *Dog* as a primary root, but the guttural in this application varies to the dental, sibilant, palatal and aspirate.

The dental is, in general, a variation of the more prevalent aspirates (sibilant, palatal, aspirate-guttural). The Bhotian dental form for the *Tiger* occurs only in two vocabularies, and the same form is applied to the *Buffaloe* in some dialects. The pure dental is not used for the *Dog* and the *Horse*. The aspirates are common roots for the *Tiger*, *Dog*, *Horse*, and are not distinguishable from those for the *Cat*, *Monkey*, *Goat*, *Cow*, *Buffaloe* and *Elephant*.

The nasal, passing into the guttural (*ng*, *ny*, *g*), is applied to the *Cow*, *Buffaloe* and *Goat*, but it has in nearly every case a direct Chinese origin.

The primarily sexual meaning of several of the roots, and their retention of a merely qualitative function in many of the current names, is placed beyond doubt by the Utraiidian languages. We have seen, in considering the words of family relationship, that the roots applied to males are the labial under the forms *ba*, *pa*, *wa*, *va*, *pang*, *po*, *pho*, *bu*, *pai* &c.; the liquid under the forms *lang*, *lu*, *lung*, *lu*, *lo*, *ru* &c.; the sibilant under the forms *shai*, *sau*, *chian*, *tho*, *thong*, *thuk* &c.; while those applied to females are the labial under the forms *ma*, *mo*, *mu*, *mi*, *me*, *mai*, *moi*, *mia*,

(sometimes *hi, pi, pe* &c.); the sibilant under the forms *si, hi, sa, sya, toha, chek* &c.; and the nasal under the forms *nu, num, na, ne, nyong, yong, jong, ing* &c.

Of these the two forms of the labial and the liquid are the common sex words; and they occur most frequently as such, or as substantive words, in the names of animals. The sibilant is rare as a sex qualitative. It is a very common element in names of animals, but from its rarity as an indubitable sex term, from its form, and from the sex words usually joined with it, we must consider it as an independent root in the existing Himalaic animal vocabulary, whatever it may have been originally.

In many cases it is difficult, and in some impossible, to ascertain which of two conjoined roots, both primarily sexual, is substantive, and which qualitative. It also happens, from the cumulative habit of the formation, that a name sometimes contains three sex roots,—the one that originally became substantive; another first joined with it as a m. or f. qualitative, and afterwards losing its sex meaning and becoming definitive or concreted; and a third superadded to mark the sex again. Thus the masc. root lo applied to the *Elephant* took the masc. labial pref., and on this concreting with the root, *p-lo*, a sex postfix was added *p-lo-bi*. The root too applied to the *Cow* took the masc. qualitative *ka-ru*, and this concreting into a postfix, the fem. form became *ma-tsa-k-ru*, equivalent to "female Bull". If *ma-tsa* first concreted, *ma-tsa-k-ru* must originally have been applied to the Bull ("male Cow"). In several instances the same compound of two sex roots changes the functions of the roots with the dialect or with the application. Thus in such a word as *la-mi* or *mi-la*, the labial must be considered as substantive in one application, because it is so in dialects where it rejects the liquid and appears as a simple root or with distinct serviles, while in a different application the liquid is obviously the substantive. In marking the qualitative roots in the compounds I have been guided by a comparison of vocabularies and by general probabilities in each case, but I am far from confident that a larger acquaintance with the glossary of the formation will establish the correctness of my analysis throughout.

The following appear to be examples of the qualitative use of the sex roots. Whether in a particular dialect, they retain the original sexual meaning or have sunk into definitives absolute, or those marking a class of animals, can only be ascertained when the existing habits of the dialect are better known. When the form agrees with that of the current sex words, as it does in some of the dialects for which we have grammatical details, it probably retains its masculine or feminine function even when it has become a prefix or postfix. I give a few names in which the sexual or definitive use of the qualitative appears to be preserved.

For the *Cat* we find *la-mi, ja-mi, me-sa, mo-chi, min-cho*, in which the two Tibetan roots are conjoined with a fem. def.; and *ngwai-pai, pa-kwai, ha-ngau-bi* in which a Chinese root has masc. definitives. For the *Dog* we find *choi-ma*; for the *Hog* *ba-li m., ti-li* prob. f. (*ti=si*), *chu-ruk f.*; for the *Gout* *pu-run m.; mi-k-re, me-te-le m.; chheng-ur, cho-le, tse-be, sha-bum m.; mi-cha, ma-dze f.*; for the *Cow* *chu-ma, mau-chu, ma-su, mi-thu, sha-me f., cho-rong, cha-ra, si-ra m., woi-tom m., ma-tom f., ma-tso-k-ru m.*; for the *Buffaloe* *wai-roi, pai-nai, pa-nu, pu-ren m.*;

for the *Elephant* mag-mi, woi-pong, p-lo-bi m.; for the *Tiger* mi-sa, ma-sa, ma-cha, sah-nu, cha-nu f.; khu-bui, khu-bi m.; for the *Monkey* si-mai, mai-nak, me-nak, mo-kha-ra, si-be f., le-be m.

The nasal fem. root occurs rarely,—lok-nin *Elephant* Tablung (neu Chinese), sa *Tiger* Namsang, sah-nu Mulung, Tablung, cha-nu Joboka, chia-nu Muthun (nu Chinese, Kumi). In the Angami *te-nu*, M. Angami *ta-nu Goat*, Nogaung *ta-nu*, Angami and M. A. nu-ne *Cat*, it appears to have become a substantive name, *ta*, *te* &c. being the most common prefix in these dialects.

The sibilant is so common as a root that it is difficult to distinguish in what cases it is used as a sex qualitative, and the difficulty is increased by some of the masc. and fem. forms closely resembling each other.

The following appear to be examples of substantive applications of the sex roots.

The masc. labial is applied—in the forms pai, bai, woi—to the *Goat* in Mijhu Mishui *kam-pai*, Mon *kha-bai*, Tounghu bai, Bongju woi; to the *Cow* in Kumi *kha-bai*; to the *Elephant* woi, mwi;—in the forms mi, bi, me, bhe to the *Goat*; to the *Cow* bi, mihi, pi, bit &c.; to the *Monkey* be, we, pi; and to the *Cat* mi, bi, be; in the forms wo, po, mo, ho, woa to the *Cow*; in the forms me, moh, pang to the *Buffaloe*; in the forms vu, phu, pong, mu, mun (phang fem. in Lau) to the *Elephant*; mau, mang, beng to the *Horse*; wun, myu, mang to the *Monkey*; in the form muk to the *Cow*; mag, puok to the *Elephant*; mok, puk to the *Horse*; muh to the *Monkey*.

The masc. liquid is applied to the *Dog* in Mon *ka-la*, to the *Tiger* in Mon and several other dialects *k-la*, *si-ra*, *sa-rong*, rang-hu; to the *Goat* in several vocabularies *k-lang*, *b-lang*, *ke-l*, [from mi-k-re]; to the *Cow* in Karen *k-lo* and Mon *ka-rau*; to the *Buffaloe* in many dialects lang, long, loi, lui, roi, la, le, reh &c., to the *Elephant* p-lo, lok, luak; to the *Horse* rang; to the *Monkey* lan, lak, nak, ra, rhu, ling, ri, re.

I tabulate some identical forms showing variations from qualitative to substantive applications.

mim-bai	Cat,	Kumi.
khu-bai	Cow,	"
woi	Goat,	Bongju.
woi-tom	Cow,	Songpu.
woi-pong	Elephant	Maram.
khu-bui	Tiger	"
kam-pai	Goat	Mijhu.
pai-noh	Buffaloe	Kumi.
a-pang	Buffaloe	Khari.
pong	Elephant	Manipuri gr.
phang „	Elephant fem. Siam.	
phuk	Hog	com.

wok	<i>Hog</i>	
bok	"	
puok	<i>Elephant</i>	Namsang.
sa-puk	<i>Horse</i>	Tangkbul.
ka-phuk	"	Lungkhe.
mok	"	Mamsang.
moh	<i>Buffaloe</i>	Assam.
wet	<i>Hog</i>	Burman.
sa-wet	<i>Buffaloe</i>	Limbu.
ka-la	<i>Cat</i>	Mon.
ka-la	<i>Tiger</i>	Mon.
k-la	"	Kasia.
ra	<i>Goat</i>	Bhotian.
la	"	Tiberkbad.
men-da	"	Limbu.
de	"	Anam.
le	<i>Buffaloe</i>	Namsang.
ahin-reh	"	Kasia.
sh-ri	<i>Monkey</i>	Kasia.
ling	"	Lau.
ku-ri	<i>Horse</i>	Tengsa.
ba-le	<i>Hog</i>	T. Mishmi.
ti-li	"	Gurung.
pi-li	<i>Goat</i>	Lhopa.
ra-li	<i>Buffaloe</i>	Angami.
ha-ri	<i>Horse</i>	Tengsa.
ma-k-re	<i>Goat</i>	S. Tangkbul.
k-ro	<i>Horse</i>	Burman.
ma-kh-re	<i>Monkey</i>	Garo.
k-ro	<i>Buffaloe</i>	Sak.
k-ra-bo	"	Kambojan.
p-lo-bi	<i>Elephant</i>	Champhung.
ruh	<i>Cat</i>	Manyak.
ruh	<i>Monkey</i>	Serpa.
lung	<i>Cow</i>	Bhotian.
k-lang	<i>Goat</i>	Maring.
b-lang	"	Kasia.
ja-lang	<i>Buffaloe</i>	Mikir.
san-lan	<i>Monkey</i>	Toung-thu.
ti-rang	<i>Elephant</i>	Anam.
lam-rang	<i>Horse</i>	Singpho.
m-rang	"	Burman.
se-rang	"	Chepang.
rang	"	Milchanang.
che-rong	<i>Cow</i>	"
che-long	<i>Buffaloe</i>	"
a-rak	<i>Hog</i>	Daphla.
men-dak	<i>Buffaloe</i>	Daphla.

<i>mai nāk</i>	<i>Monkey</i>	Muthu.
<i>k-lak</i>	"	Silong.
<i>lok-niu</i>	<i>Elephant</i>	Tablung.

1. CAT.

I. (a.) The old Bhotian *byi-la* is only found in the Bh. dialect of Lhopa, pi-li, but it occurs in a contracted form in the Serpa and Sunwar *be-r-mo*. Murmi has *ta-wa-r* and Gurung *na-wa-r*. The Serpa and Sunwar form is also Male *ber-ge* and Uraon *bir-kha*. Similar names are prevalent in Telugu, Gond, Kol, and in the Sanskritoid languages of Northern India, *bir-al* Bengali, *bil-al* Gond, *pilli* Telugu, *bulau* Maldivian, *billi*, *bil-luo* Hind., *bilai*, *billce* Sindhi, *bra-ir*, *bra-ur*, Kashmiri. A similar word is used for the *Tiger* in Dravirian, *pili* Tuluva, *piri* Toda, *puli* in the other dialects.

The exceptional Deoria Chutia *midige* is probably *midige* from *mi-li-ge*, *biri-ge* (comp. Male *ber-ge*, Toda *piri*, Tuluva. *pili*, Hind. *billi*).

(b.) The Bhotian form is also found with the masculine particle prefixed in the Lahuppa *la-mi*, N. Tangkhul *la-me*, in which the root has the same form as in the Bhot. *byi-la*. The Mulung, Tablung and Mrung *a-mi*, Kyau *mi* are probably contractions of a similar term.

(c.) The common Yuma *min* &c. of *min-cho*, *min-boi* Kumi, *meng*, *mi* Kyau, *ta-myin* Mru, *min* Khyeng, *min-yo*, *tha-mi-yo*, *sa-min-yo* Karen, (? being Sak), found also in Mikir *meng* (Kyau) and Ahom *men*, resemble the Bhotian *mi*, and do not appear to be variations of the Chinese vocable. But the Kumi *cho* of *min-cho* and the Karen *yo* appear to show that it was originally the fem. qualitative in this group also. [See III].

II. The Gyarung form *ta-rhu* appears to be the immediate parent of the broad Burman *k-roung*, *k-young*,—the Burman group having strong special affinities with Gyarung.

III. The liquid root in the prevalent slender form (Chinese, Lhopa, Dravirian, N. Indian) and with the *r* of the Nipalo-Vindyan forms, is found in the eastern sub-Himalayan band disjoined from the labial, or with a distinct root or definitive interposed. Taying Mishmi, *ma-ja-ri*, *na-dza-ri*, Abor-Miri *men-da-ri*, *ka-da-ri*, *men-ku-ri*, Changlo *dai-ni* [comp. Garo *ja-rang*, *dai-rang* all]. The *ma-ja*, *ka-da* &c. of the Mishmi. Abor terms may have been double prefixes, in accordance with the Tibetan habit of heaping particles, which is well preserved in some of the Abor directives (*ante* p. 16), and if so they probably served to distinguish the names of the *Cat* from those of other animals having the same root, and one of the definitives. Thus *Horse* is *ku-ri* in Tengsa Naga; *Buffaloe* is *sa-loi*, *nga-loi* &c. in some Manipuri dialects; and in Mishmi the root, with one of the prefixes, occurs in leh *Hog* (wild), *ba-li ib.* (domestic), *ta-loi Buffaloe*. The Lepcha *a-leu* is probably a contraction of a Bhotian or Mishmi-Abor form, the former probably, as the adjacent dialects have *wa-r*, *be-r*. The Dhimel *men-khou* is the Abor *men-ku-ri* with the liquid elided, and the Newar *bhou* appears to be the labial prefix in a broad form (comp. Maldivian *bu-lau*). The Kurgi *na-ri Tiger* also separates the liquid from the prevalent Bhoto-Dravirian labial, and supports the derivation of all the Dravirian terms from Tibetan sources. It is connected with the Abor-Mishmi form *da-ri*,—*ta*, *da*, *na*; *sa*, *za*, *ja*, *cha* &c. being merely variations of the same Tibetan prefix. The liquid must have been carried across the Himalayas before it was concreted with the other elements, and

its diffusion is so wide that it must have taken place at an exceedingly remote period. The forms in which it is immediately preceded by the labial are probably West Tibetan or Bhotian, although at the time when they were transported from Tibet there were probably several Bhotian dialects. The Abor-Mishmi forms are probably East Tibetan, if *ri* be the root, *da*, *ka* &c. being an E. Tibetan prefix. The Gyarung *ta-rhu* would be a similar form, and *ta-ri* or *ta-li*, *da-ri*, *na-ri* &c. may have existed in other E. Tibetan dialects.

But another view may be taken of the Mishmi-Abor terms. In the normal animal nomenclature of the formation the liquid, as we have seen, was masc., and the labial in the forms *ma*, *mi* &c. fem. *Ma-ja*, *ma-dsa* may have been current as a fem. term, the root being *ja*, *dsa* &c. The superadded masc. postfix would make the term masc. *ma-ja-ri*. So from *ja-ri*, the masc. form, the fem. may have been obtained by the prefixing of *ma-*, or *ma-* when prefixed may have come to be a mere definitive. That *ja-ri* was the proper masc. form and had its counterpart in the fem. *ja-mi*, is established by the adjacent Mijhu Mishmi retaining that form as its generic name, in like manner as in sp. Bhotian the fem. *si-mi* has superseded all other names. We may conclude therefore that *ja*, *dsa*, is the root and merely a variation of the Tibetan *chi*, *chu*, *cheu*, (*chu*, *tsah*, *sha*, *ja* &c. in other applications; for *tiger* *su*, *tsa*, *ja* &c. are used). In *men-ku-ri*, *ku* may also be a variation of the same root (*chu*, *tu* &c.). (See *Dag*).

The same combination with the labial definitive proposed (as in *byi-la*, *pi-li*)—found in Manyak only amongst the known Tibetan dialects, (*ma-cheu*)—occurs in the South in Khari Naga *ma-chi* (Thochu *lo-chi*), Bodo *mou-ji*, Joboka *me-sa*, Kumi *min-cho*, Karen *tha-min-yo*. The Dophla-Aka *a-che*, *a-sa*, is a contraction of an analogous form. The Joboka and Dophla root vowel in *sa* corresponds with that of the Mijhu Mishmi *ja*. The Bhotian form *si* is preserved in Lungke *si-yo*, the final also occurring in the Karen *tha-mi-yo*, *tha-min-yo*, and being probably a soft form of *cho*, *jo*, as it does not appear as a servile in other names of animals.

The Horpa *chu-la* and Thochu *lo-chi* are not found in the south.

The Horpa form *chu* suggests that the Magar *su-thu*, (*sa-tum* *be* *r* Abor), C. Tangkhal *tu-mi*, Maring *tung*, Manipuri *hau-dong*, Khoibu *tong-kan*, Maram *tok-pa*, contain the same root in a dental form (as in the Dooria Chutia *mi-di* for *mi-li*, *pi-li* &c.). It undergoes a similar range of variation in some of its other applications.

The Tiberkhad and Milchanang *pi-shi* is explainable as a slender form of the Manyak-Naga combination, similar to the sp. Bhotian *si-mi*. Gerard gives both *pi-la* and *pu-shi* as Bhotian forms, and if *pu-shi* were genuine Bhotian it would be hard to resist the conclusion that *pi-shi* is also Bhotian, however much it would perplex the enquiry as to the directions in which this combination had been propagated. The Dravirian *pu-su*, *pu-chela*, *pu-chehe*, Kol *pu-si*, and Kapwi *to-pi-sa** are examples of the same vocable, and it has also been carried to Asonesia, *pu-so*, *bu-si*, *pi-tsa*. As the form *pu-shi* does not occur in any other vocabulary of Bhotian, it may be safely considered as an exotic from Tiberkhad if it is really used

* In the App. to chap. v. the Pashtu *pishi*, *pishik* has been displaced and entered as Kapwi, and the Kapwi *to-pisa* as African. *Pisa* may however be *pi-sa*, comp. the Joboka *me-sa*. The Rotuma *pi-tsa* is the same variety.

by the true Bhotians of upper Kinawar. Gerard states that in the North-West of Ladak Bhotian becomes intermixed with Turkish, and if *pi-shi* be current in Ladak it is probably of Turkish derivation. The true general course of its archaic diffusion appears to be clear. It is a primary Scythic term cognate probably with the Tibetan, but distinguished from the current Tibetan by the sibilant invariably following the labial, and in its most common form taking a guttural final. Mongol has *mi-choi* and the probably contracted *mii*. The Tungusian terms are not given by Klaproth. Ugrian has *mi-sak*, *mi-shok*, *ma-tska*, *me-tschik*; and Turkish *mu-shak*, *me-shuk*, *mi-shik*, *pi-shik*, *ata-p-shik*, *ata-ma-chi*, *ata-p-si* &c. (*mouse shik-an* &c.). With these Ugro-Turkish forms are connected, on one side, the Caucasian *pi-shik* (Chari) and Semito-African *bi-s*, *fi-so-na*, *mu-si*, *mu-sa* &c. (the Turkish *ata* is also African), and, on the other side, the Pashtu *pi-shik*, *pi-shi*, Sindhi *pu-si*, and Tiberkhad-Dravirian *pi-shi*, *pu-si*, *pu-sei* &c.

The Chinese *miau*, *mau*, *biu* &c. is found in Anam, Lau, and Kasia in the original form *miau*, and the Mon-Anam stream has carried it to Tengsa *myau*, Songpu and Koreng *myau-na*, Kumi *miyaung* and Garo *myou*. The Limbu and Kiranti *myong*, Namsang *miang*, Muthan *miah* are probably also Chinese through Mon-Anam. The Kambojan *chi-ma* may be the same root.

The Chinese *niao*, (Hok-kien, Hai-lam), *ngio* (Teo-chu), is found in Singpho *ngyau*, Jili *te-ngau*, and Champhung *ha-ngau-bi*. The Töung-thu *ngwai-pai*, and Mon *po-kwai*, are probably related to it.

ONS. The Bhotian root *bi*, *pi* with the liquid servile, only occurs in a few of the Manipuri-Yuma dialects, and the prefixal position of the servile shows that the Ultraiidian names are not derivatives from the later concentered Bhotian and Lhopa *bi-la*, *pi-li*, but were received when the root was separate. This is made still more manifest by the prevalence of the labial root in the Yuma dialects, either separate, with a def. prefix, or followed by a distinct root. If the prevalent archaic Indian name be of Bhotian origin, it must be very ancient and derived from a glossarial current distinct from those that carried Bhotian words into Ultraiidia. It was probably preceded in the Dravirian family by the Scythic *pi-shi* &c. which is found in Ultraiidia and Asonesia, while no examples of *pi-li*, *ti-li* are found out of India.

The sibilant is not found in the Horpa and Thocha *mase* forms, but the fem. form current in Manyak is common. The form of the root is not Manyak, whence it may be inferred that the connection belongs to the *esa* when similar fem. forms were current in the Sifan languages, or Tibetan generally. The form *sa*, *ja*, *da* Mishmi Dophla, Abor, Joboka—is not found in Tibet. The Horpa *chu* appears to be connected with the Magar *thu*, Kumi *cho*, Karen *yo*. The slender Bhoto-Thochu *si*, *chi*, is Bodo *ji*, Mubung *chi*, Lungke *si*. These various forms and their distribution attest an ancient and general transfer and diffusion of the Tibetan names to the southward.

The Burman *h-rong* is evidently one of the latest Sifan acquisitions, and belongs to the modern Gyarung-Munyak current.

The Chinese names, which do not occur in Tibet, appear to have early spread into the Ultraiido-Gangetic province. As they are best preserved in Mon-Anam vocabularies, it is probable that they were received by the other dialects from them. The Kumi, Koreng, Songpu, Tengsa, Kiranti and

Limbu names are all connected, and are the Chinese form with a nasal final.

2. Dog.

1. (a.) The Bhotian khyi, Gyarung and Takpa khi, has the same form in the South Bhotian dialects of Serpa and Lhopa *c-khi*, Abor *i-ki*, *c-ki*, Dhimel and Limbu *khi-a*, Newar *khi-cha*, Kambojan *chi-ke*.

(b.) The most common Ultraiidian term is, in its full forms, *khwi*, *khwe*, *kwi* or *kui*. The Thochu *khwa* is a similar broad form and the adjacent Sokpa *nho-khwe* has the same form with the slender vowel of Burman, *khwe*. This identity between the normal Ultraiidian form and the Mongolian, shows that the former was not derived from Chinese (*kiuen*, *hun*, *kau*), but from Scytho-Tibetan. That *khwe* is a distinct root in *nho-khwe* and the other Mongolian forms, *no-koi*, *no-grai*, *no-choi*, is clear from *koi*, by itself, being applied to the *sheep* in Mongolian, *koi*, as in Yeniseian, *koi*, *kay*; to the *Dog* in Korean, *kai*; in the Mongolian form to the *Dog* in Fin with a postfix or second root *koi-ra*, *koi-re*, *koi-r*; and, lastly, to the *Cat* in Mongolian *mi-choi*, Korean *koi*, *kui-ni*, Japan *ne-ko*. In its applications both to the *Dog* and *Sheep*, the guttural root has frequently a final *n* or second nasal root, in the Scythic vocabularies. Thus for the *Sheep* Mongolian has *cho-min*, *cho-in*, *ko-ni*, *go-ni*; and for the *Dog* Tungusian has *nina-kin*, *nena-ki* &c., and Samoiède *wene-ku*, *ka-nang*, *ka-nak* &c. The nasal is shown to be a distinct root by the Fin *pood-nak*, Japan *inu*, *in*, Aino *inu*, Tungusian *nyin*.

The Thochu and Burman *khwa*, *khwe*, *khwi*, *kwi*, being thus undoubtedly Scythic in their affinities, it is possible that the Bhotian *khyi*, *khi*, is a softening of *khwi*, and not a derivative of the Chinese *kiuen*. That the Sifan-Ultraiidian form is not a modern derivation from the Sokpa *nho-khwe* is evident from its wide diffusion in the Gangetic, Ultraiidian and Indonesian provinces, and from the Sokpa distinctive root *nho* being absent in Thochu and in the southern vocabularies. It must belong to the earlier ages of Scytho-Tibetan connection. The Gangeto-Ultraiidian forms are as follows. Anam *khuyen*, Mijhu *Mishmi kwe*, Taying M. *n-koe*, *no-kwe**, Murmi *nan-gi*, Gurung *no-gyu*, Changlo *khu*, Chepang *kui*, Newar *khi-cha*, Tiberkhad *khui*, *kaui*, Mlechuanang *kwi*, *kui*, Garo *kai*, Mung and Tablung *kui*, Singfu *gui*, *kwi*, Jih, Mru *ta-kwi*, Rakhoing *khwi*, Burman *khwe*, Karen *ihwi*, *tai*, Toung-thu *thwe*, *ti-twi*, Lahuppa *thu*, Sak *ku*, Manipuri *hwi*. The contracted forms are *hu*, *su*; *zu*, *z*, *hi*, *shi*, *si*, *wi*, *ui*, *u*, *ai*. Namsang Naga *hu*, Muthun, Joboka, Mikir *hi*, So *gpa shi*, Maran *a-thi*, Koreng *ta-si*, Mozamé Angami *ta-su*, [? Angami *the-u* N. Tangkhul *phu*], Nagaeng *a-z* [= *ta-zu*], Tengsa *a-ti* *khyeng*, Kumi, Kyau, Kapwi, C. Tangkhul, Khoibu, Maring *wi* or *ui*, Kyau *bui*, S. Tangkhul, Shindu *u*, Khari and Silong *ai*.

The Horpa *ka-ta* and Manyak *k-sha* may be the Tibetan prototypes of the Lepcha *ka-shu*, *ka-zu*, Limbu and Kiranti *ko-chu*, Newar *khi-cha*, Magar *chhyu*, Sunwar *ka-chung*, Bado *choi-ma*, *chi-ma*, *sei-mu*, Garo

* Mr. Brown's form of the Taying-Mishmi word, *neko*, led me to believe that it and the Murmi *nan-gi*, *nagi*, Gu uog *nagyu*, were distinct from the Tibeto-Ultraiidian root *khi*, *kwi* &c. and allied to the Dravido-Australian *naya*, *nayi*, *nagi*, *nago*, *nlay* &c. in which the root is *na*, *la* &c. It is now clear from Mr. Robinson's form, *akoe-nokwe* (Mijhu *kwe*), that the Taying root is *koe*, *kwe* and *n-*, *no-* the Mishmi nasal prefix. The remarks on the affinities of the Dravido-Australian names of the *Dog* (ch. v. sec. 11) must be so far modified.

a-chak, *Kasia ka-sen*, *Muong tchai**, *Anam*, *Ka* and *Chong cho*; but it is more probable that these forms are variations of *koi*, *gyu*, *khu* as in Mongolian.

2. The *Anam muong* i, *Lau ma*, *Champhung a-val*, *Naukowsy am*, *hume*—to which the *Angami the-fu* and *N. Tangkhul phu* may perhaps be added—is possibly one of the distinctive roots of the *Mon-Anam* sub-formation. If so the immediate affinities are Scythic,—*buang*, *bun*, *ban*, *men* Samoiede, *pon*, *puny*, *pine*, *piya* Ugrian. The name has been carried to *Aconesia*. But it is probable that it is merely the *Minahic* sex root, used substantively as in so many other names of animals. [The *Lau* form is applied to the *Cat* in *Kambojan*, *chi-ma*.

3. The *Mon ka-la*, *h-la* is the liquid, used also for the *Tiger* in *Mon* and some of the cognate vocabularies. It appears to be the common masculine root.

4. The Chinese *kau* has been introduced into *Anam* only.

100 OBS. The Tibetan vocables for the *Dog* are current in nearly all the Ultra-Indian and Gangetic languages. A form which appears originally to have been *khwi*, *khwe*, *khui* (*Bornan*, *Tiberkhad*), and which the *Thochia khwi* indicates to have been of *Sifan*—probably (*Gyarung*)—derivation is found in most of the Ultra-Indian vocabularies, and it must have been carried eastward along the Gangetic band as it is found at the two extremes, *Mishmi* and *Tiberkhad*. It has undergone various changes of form; and special connections can be traced through them. In the Gangetic band the augmented form given by the *Dhimal* phonology is found in *Limbu*, and the *na*-prefix of *Tayang Mishmi* is found in *Murmi*,—a relation to the *Nipal* group confirmed by other glossarial coincidences. (e. g. the peculiar word for the *Hog ba-li* *T. Mishmi*, *ti-li* *Magar*). In the great Ultra-Indian sweep of the vocable it presents modifications of one form only. No special affinities can be inferred from the present range of the full form, but the contracted ones show a close connection between the *Karen*, *Yuma*, *Manipuri* and *Naga* groups, which appear as a cluster of sister dialects. The *Karen* and *Toung-thu* *thwi*, *twi*, *Luhuppi thu*, *Maram thi*, show the beginning of the enasulation. In the *Manipuri hwi* the pure aspirate has ejected the dental. The *Namsang hu*, *Moz*, *Angami su*, *Nogabang z*, [*Angami fu*, *N. Tangkhul phu*, if not *Mon-Anam*] appear to be referable to it, and mutually connected. The *Maram a-thi* has probably a distinct connection with the *Karen*—*Toung-thu* forms, and it appears to have been the parent of the *Songpu shi* and *Koreng si*, whence the *Naga hi*. From the distribution of the very contracted forms *ui* or *wi* and *u*, they appear to be also referable to the *Karen* sub-formation. They are distinctive of *Khyeng* and most of the other *Yuma* dialects and of some of the adjacent *Manipurian*. The *Khari* and *Silong ai* may be from the *Garo kai*.

The *Bodo choi* (whence the *Garo kai*, *Muong tchai*), appears to be related to the *Anam*, *Ka* and *Chong cho*, found also in *Binnu cho*, *chuh*. The *Karen*, *Yuma*, *Naga* and *Manipuri* sibilant forms, *thwi*, *thu*, *su* &c., and the *Nipal chhyu*, *chu*, *chung*, *shu*, *zeu*, *cha*, show that the same variation of the guttural originated both to the westward, and eastward.

* See Part I, ch. iv. sec. 2 on the special connection of the *Muong* vocabulary with the *Bodo* and *Garo*.

† Brown's *Voc.* Probably the dialect is a mixed one. *Pallegoix's* *Diet.* does not give a labial synonyme.

The guttural prefix of the Nipal varieties and the nasal final of Sunwar show that they belong to the earlier forms of the Gyarung—Mishmi—Yuma band, represented by the Tiberkhad khui, Milch, kui and not to the emasculated Karen and Burman. The *k* prefix is still current in Mishmi, Kumi, Mon, Toung-thu and to some extent in Karen. In the Manipuri and Naga dialects the dental and palatal forms are more common, but *ka* is still current in several. (Champhung, Luhuppa, N. and C. Tangkhul, Koreng &c.).

The Anam, Ka, Chong and Binua cho belongs to the same era. As the Mon *ka-la* is exceptional, its proper application being to the *Tiger*, it is probable that it possessed a similar name for the *Dog* at one time.

3. Moo.

1. The full Bhotian form phag, phak, is found in the southern Bhotian vocabularies, phak Serpa, phag-pa Lhopa, in Limbu and Kiranti phag, in Chepang piak, Changlo phak-pa (Lhopa), Mikir phak.

The Horpa and Manyak forms in *v*, *w*—Horpa vah, Manyak wah, of which the older forms must have been vak, wak,—indicate that the most common Ultraindian forms were of Sitan derivation, and as some of them have *ta-*, *ka-*, it is probable that Gyarung had *ha-wak*, *ta-wak* or *ta-vak* before its proper Tibetan vocable was displaced by *ki*. It had not received *ki* when it spread to Ultratania, for that form of the Chinese root is not found there. The Magar wak, Jili *ta-wak*, Singpho and Mrung wa, Rakhoing wat, Burman and Kyau wet, Khyeng wut, weak, Khyau vauk, Kumi and Khari Naga auk, Kumi au, Kami o, Garo, Namsang, Muthun, Joboka and Sak vak, Mru *ta-pak* (! *ta-vak*), Nagaung, Mulung, Tablung and Tenga ak, [? Songpu *gh-ak*], Khari auk, Koreng *ka-vak*, Champhung *a-vak*, Garo, Maram, Maring and Lungkhe wok, Kapwi bok, Luhuppa, Khoibu, N. and C. Tangkhul bok, S. Tangkhul and Manipuri ok, Angami and M. A. *tha-vo*, *the-vo*, Shindu vo, Sunwar po, Lepcha mon, Lau mu, Bodo *yo-ma*, *o-ma*, Dhimal *pa-ya* (comp. *on-hya horse*, *rho-ya monkey*, *pu-ha snake*, *hai-ya fish*, *khi-a dog*, *ji-ha bird*, *na-ia elephant* &c.). As Anam often changes the labial into the aspirate, its *heo* is probably from *beo* or *weo* (weak Khyeng).

2. Mon *ka-let*, *ka-leik*, *k-lueit*, *k-lut*, Taying Mishmi *ha-li*, Mijhu Mishmi leh, Gurung *ti-li*, Daphla *a-rak* softened in Abo to *e-yeg*, *e-ek*, yuek [= Mon lueit], Kambojan *ch-rok*, *chu-rak*, Chong *cha-rak*, Ka *chu-r*, Anam *t-ru*, lon. This application of the liquid root to the *Hog* is not Tibetan, and the distribution of the names shows that they belong to the peculiar Gangeto-Mon current. The broad forms *rak*, *luk*, *rok*, *rak*, appear to be the originals, *let*, *li*, *yeg*, being characteristic of the later emasculated Gyarung-Mishmi phonology. They are connected with the Manipurian names for the *E. phant*, *lok*, *loak*, *luak* [= *lueit*]. A similar archaic form is applied to the *Monkey* in some Manipurian dialects and Silong, *nak*, *lak*, *lut*, *rhu* [= *rhu Cat Gyarung*]. The root is not a native Chinese or Mon-Anam one for the *Hog*. It is evidently of secondary origin, ancient as the form is. It is probably a contraction of one of the older names for the *Boar*, phag *ka-luk* &c.

The amplified vocalic forms applied to the *Buffaloe*, *Elephant* and *Monkey* in some vocabularies, *lui*, *ru*, *ruai* &c. appear to be contractions of forms like *lueit*, *luak* &c.

3. The Chinese root *chu*, *chi*, *tu*, *ti*, has been received by Karen *tho*, Toung-thu than, Murmi *dhwa*, *thua*, and Deoria Chutia *chu*. The Anam

Heo like the *Gyarung ki*, may possibly be a variation of the Chinese *chi*. Anam has also heo kui.

4. The *Kasia sniang*, (prob. *sní-yang*, comp. *shín-reh*), Nicobar haon; hown, appears to be connected with the nasal name for the *Horse* &c., but it must be left undetermined.

5. The *Aka kuk-pa*, is Hindi *khuk*.

Ons. The Ultraindo-Gangetic names are nearly all Tibetan. The Bhotian forms have a small range. The Ultraindian names appear to be Sifan, and mostly archaic, that is they were received before the loss of the guttural final. The Mon-Anam names are Tibetan and secondary, one being from a soft Angami form of a Manipuri variety of the root, and the other being the Tibetan liquid masculine qualitative in an archaic form. Anam may possibly preserve a native root, but it is probably Chinese. Karen has received the Chinese name and communicated it to Deoria Chutia and Murni. This is one among many glossarial evidences of its pre-Burman influence, diffusion and Chinese relationship.

4. GOAT.

1. (II.) The Bhotian *ra* is current in Serpa, Lhopa, Murni, Gurung Magar and Changlo. Tiberkhad has *la* for the female. Allied forms are found in Garo *pu-run*, Mithun *ron*, Joboka *roan*, (whence the Malung *yon*, Tablung *yun*), Maring *k-lang*, *Kasia b-lang*, Singphu *pai nam*, Anam *hoi nam* (*hoi=hoi, pai*), Lungke, Kumi *ke-l*, Kyau *ke-rat, kie-ar*, Mru *ta-mu-a*, Limbu *men-da*, Garo *do-bak* (Brown), Anam *de*. The liquid is clearly the masc. root. It is current in the same forms as a sex word, and in the names of other animals.

2. (III.) The Bhotian *chang*, Horpa *chhe*, Thochu and Manyak *tsah*, *Gyarung ku-so*, are found in Anam *su hoi*, (= *su boi*), Abor *sha-ben, so-ben*, Aka *sha-bum*, Kumi *su-be*, Kani *tsa-be*, Lepcha *sa-ar*, Kiranti *chheng-ar*, (Bhot. *chang-ra*), Newar *cho-le*, Sunwar *cha-r-sye* [See *Com.*], Chepang *mi-cha*, T. Mishmi *ma-dze* (Brown), Songpu *zyu*, Burman *she-ik, tshi-et, chli-t*.

The Anam, Abor, Newar, Kumi, Kani and Songpu forms in *u*, *o*, resemble the *Gyarung so*. The Aka, Chepang, Lepcha and Sunwar *sha, sa, cha* adhere to the Bhotian, Thochu and Manyak vowel. The Kiranti, Taying Mishmi and Burman have the *e* of Horpa. But these variations are too slight to warrant any inferences, save that *u, o*, is probably the older form.

3. (I.) The labial root is very prevalent as a name for the *Goat*, although it may have originally been a contraction of Tibetan forms in which the sex definitive was conjoined with the root, as in the Bhotian *ra-ba, ra-ma*, Changlo *ra-ba*. The Abor *sha-ben* and the cognate terms may be the sibilant Tibetan root with a similar postfix. Mijhu Mishmi *kam-pai*, Singfu *pai-nam*, Taying M. *ma-bie*, Bodo *bur-ma, bor-ma*, Pengsa and Nogaung *na-bang*, Khari *na-bong*, Mrung pan, Manipuri *ha-meng*, Kereang *ka-mi*, Maram *kha-mi*, Lhuppa *me*, Champhung *a-mu*, N. Tangkul *mi*, C. T. *mi-k-re*, S. T. *ma-k-re*, (*k-re* male postf.), Kumi *me, moe*, Khyeng *me, ma*, Pwo Karen *bhe*, Mikir *be, bi*. In some of these terms the labial retains a qualitative power. Sak *hi-bi*, Mon *kha-bhai*, *kha-pa*, Toung-thu bay, *ta-byu-pai* (Cat ngwai-pai), Bongju woi, Kuki

hui, Anam su hoi, hoi nam, * Lau pa, pe, Ahom pe-nga, Deoria Chutia li-pe—du—ru, Kambujan pa-pe, Silong pet.

The labial is not used in Tibet as a name for the *Goat*, the only true Tibetan radical name being the sibilant (2). These labial names are obviously of secondary southern origin. The various forms are simply the different current modifications of the labial masculine root, and most of them are also used as names, or elements of names, for the *Goat*, *Cow*, *Buffalo*, *Elephant*, *Horse* and *Monkey*. Many of the dialects have use the labial for the *Goat* retain the proper sibilant root of Tibet for the *Cow*, and in forms and combinations identical with those current in other southern dialects, or in Tibetan, for the *Goat*. Thus Tong-sa, Nogaung and Khari have *na-bung*, *na-bong* for the *Goat*, but *wa-si*, *na-si*, *ma-si* for the *Cow*. The same remark applies to the liquid qualitative. Thus while Kyau and Kumi have only *hi-ar*, *ke-rat*, *ke-si* for the *Goat*, they retain the Tibeto-Gangetic forms *cha-ra*, *si-ra*, *tsi-ga*, *sha-rh*, as names for the *Cow*.

6. The Chinese *yeung*, *yong*, *yang*, *yu* of *shan yeung*, *tao yeung*, *shan yang*, *tsau yang* &c. (*sharp mih yeung* &c.) appears to be found in Anam du-ong, thi-ung, (Brown). The common native term is *de*.

4. Jili *ta-khven*, Namsang *kieh*, Kapwi *ken*.

5. Khoibu *hing-ngau*.

6. Angami *te-nu*, M. A. *ta-nu*. This appears to be the fem. root used substantively. The Burman *nua*, *nwa Cow* (Chinese) has some resemblance to it.

Obs. The Ultra-Indo-Gangetic names that are similar to the Tibetan do not appear to have been derived from any single Tibetan dialect. They reproduce all the Tibetan forms, and must be considered very archaic. The Bhotian secondary form *ra* is only found in the Himalayan vocabularies, in which it is probably modern. The Kiranti *chheng-ar* is the full Bhotian name slightly modified, the vowel being similar to the Hiorpa *chhe*. The prevalent sibilant in the south is probably Sifan. The paucity of names containing this root is remarkable when its persistence in all the Tibetan dialects is considered. From the great phonetic range of the labial names, the peculiarities of some, and the serviles annexed to several, it appears that the labial became current as a substantive name for the *Goat* at a very early period, and in dialects that acquired great influence. The sibilant root, in the names in which it survives, has the labial masc. postf. in the forms *mi*, *ma*, *be*, *ben*, *bam*. With *mi* Chepang, and *be* Kumi, Kami, *ben* Abor, the prevalent Manipurian *mi*, *me*, *meng*, Yuma *me*, *bi*, Taying Mishui *bie*, Mikir *be*, *bi*, Karen *bie*, correspond, so that all may have been derived from one East Gangetic dialect. The *Naga bung*, *bong*, is probably related to the Aka *bam*, and it appears to have been the original of the Bodo *bur*, *bor*, the older form of which is preserved in the Mrung *pan*. The Mijhu and Singpho, Mon, Tungthu and Yuma *pai*, is a distinct form, perhaps derived from Tibet by the Irawadi route, like other peculiar Sifan—Irawadi vocabularies. It occurs in Thochu in the form *wai* (*Monkey wai-si*), and in all the forms in other Ultra-Indian names.

The Lau and Kambujan names appear to have been derived from the Karen-Yuma *me*, *be*.

* So the Arung Naga name of the *Ali-thun*, *bui sang* (*buffaloe ga-bui*) is *hui* in Angami.

5. Cow.

I. (a.) The Bhotian *ba*, *lang*, are found in *Lhopa bla*, *cow*, *lang*, *dang* *bull*, *Tiberkhad ba-lang*, *rad*, *Milchanang lang*, *Lepcha long*, *Changlo wa*.

In the slender form it is found in *Sgau Karen go pi*, *Dhimal bi-a*, *Sunwar bi*, *Lepcha bik*, *Limba bit*, *ye-pi*, *Kiranti pit*, *Marmi mhe*, *mih*, *Gurung myau*, *Bengali ga-bhi*.

In some of these vocabularies as in Bhotian the labial has become a substantive term, or it was originally received into them as such. In most of the Ultraindian dialects it is conjoined with proper substantive names, and has either a sexual or a definitive force. As our information respecting these vocabularies is too scant to enable us to distinguish those cases in which its sexual meaning is still recognized, from those in which it has become a mere definitive, and as it is current with both functions in Bhotian and several other languages of the family, I have in all cases italicised it, in order to give greater prominence to the substantive names. The forms *ma*, *mi*, *mu*, appear to be always feminine. *Ba*, *pha*, *bo*, *bu* are masculine. But as the two forms of the labial are easily interchangeable, masc. forms such as *pha* become fem. in some dialects, and fem. become masc. *Boi*, *woi*, *bi*, *wi*, *wa*, would be masc. if the Bhotian masc. force of *b*, *p*, *w*, were preserved, but in some cases they appear to be fem. The *i* may have a fem. power in some Arianised vocabularies, as in *Kasia*.

(b.) The Manyak form *wo-mi* may possibly be directly connected with the *Shan wo*, *wea*, *Anam bo*, *Toung-thu po*, *Mon e-won-han*, *Sgau Karen a-mo*.

A similar form is applied to the *Goat mu*, *woi*, *po-pe*, *Buffaloe moh*, *Elephant mon*, *vu*, *mu* &c., *Hog vo*, *po*, *mon*, *mu*.

(c.) A consonantal guttural form occurs in *Maring muk*, *Manipuri* and *Tangkhu sa-muk*, *Champhung she-muk*, *Luhuppa si-muk*, *Sak tha-muk*, *Khoibu na-muk*. In these forms the sibilant is the def. pref. Comp. in *Manipuri*, *sa-muk cow*, *sa-mu elephant*, *sa-gol horse*, *ha-mung goat*.

The same form is applied to the *Horse* in *Maring*, *Khoibu*, *S. Tangkhu* and *Langke puk*, *phuk*, and *Namsang mok*, and to the *Elephant* in *Namsang puok*, *Singpho mag-wi* (*Manipuri sa-mu*, *Champa ta-mun*).

(d.) *Namsang man*. The same form is used for the *Horse* in *Muthun man*, and *Joboka mang*.

II. (a.) The Bhotian *chuk* of *pha-chuk* is found in *Serpa chu-ma*, *Taying Mishmi man-chu*, *ma-chu*, *ma-tsa-ku*, (masc.) *Abor sou*, *Pwo Karen tshu-men*, *Bodo ma-shu-ja*, *Garo ma-shu*, *Mruung ma-chau*, *Khari wa-au*, *Angami* and *M. A. mi-thu*, *Tablung* and *Muthun ma-hu*, *Joboka mu-hu*, *Mulong ma-hu-nyu* (fem.) *Ahom hu*, *Singpho kan-su*, *Anam sung-krau*, * *Lungke tcho*.

b. The *a* and *i* forms of *Thochu zya* (*bull*) and *Manyak nga-zi* (*bull*) are found in *Aka shye*, *Abor sha-me*, *Chepang ma-shya*, *Newar sa*, *Changlo ja-ba*, *Nogaung na-si*, *Tengsa* and *Kasia ma-si*, *Khyeng shya*, *Kumi tsi*, *Kyau cha-ra*, *Kumi si-ra*, *Mru tsi-ya*, *Khyeng sha-eh*.

The forms with the liquid masc. postfix are similar to some of those for the *Goat*, *chang-ra*, *Bhot.*, *chheng-ar* *Kiranti*, *sa-ar* *Lepcha*, *cha-ra-sye* *Sunwar*, *cho-le* *Newar*.

The same roots appear to be contained in Arian names for the *Bull* *bri-sha*, *shanr*, *Goat chha-gal*, *chlag*, *aia*.

* Brown's dialect.

3. (III.) *Sarpa* *wa-tora*, *Kapwi tom*, *Karang ma-tom*, *Miram a-tom*.
 4. (IV.) The liquid probably retains its sexual function, in the Taying *Mishni ma-ta-h-ra* (*ha-ra* is the current form for male), *Anam sun-r-kan* (Brown), *Kyan cha-ra*, *Kumi si-ra*, *Mru ts-ya*, *Khyeng sha-ra* [(*shat sa-ar* Lepcha)], *Mikir cho-rang*. In the Mōh *ky-shin* and Karen *ke-lo* (Brown) the qualitative has become substantive, as in the similar names for all the other animals in our list.

The *Gyal* is termed *shial* (= *shi-al*) by the Kuki. The Asiatic *Gyal* of the Bengalis is also called *se-loi*. See *Buffaloe*.

5a. The Chinese root in the Horpa *ngau-nu*, Thakel *gwa*, Manyak *nga-zi*, is found in several of the southern languages, but it appears to be a direct Chinese importation. The Lau race have spread it to the northward and probably also communicated it to the Karen, Burmans, Jills and Lhopas, the Lhopa form being the same as the Khamti. Lhopa *ngo* (generic), Khamti *ngo*, Siam *ngau*, *ngo*, Jili *ts-ira*, Burman *mu*, *nwa* (*nwa-hu*, whence the Sgan Karen *n-mo* *Cho*; *nwa-pho*, *nwa-pho* bull), *Kumi kha-bai*. Comp. *nim-boi-oh*.

5b. The Chinese masculine qualitative *ku*, *kue*, is found in Siamese applied to the *bull kha*. The Karen *go* and Khamti *ku* generic are referable to it.

5c. The only Sitan forms of the Chinese that has spread south is the slender *Gyaring nye-nye* found in Miao's dialect (and this in the adjacent bit).

6ns. The Bhotian *ba* and *lang* have the usual limited and modern diffusion. They are only found in the southern Bhot. dialects and some of the contiguous ones.

The slender form is the Manyak variety of the Tibetan *mas*, *labal bi*, *mi* (occurring also in Thochu), and it was probably derived by an east-Gangetic vocabulary from a Sitan dialect before the native names were replaced by Chinese. It has a very limited range, Dihmed-Sipat. In Sgan Karen it appears to retain its proper qualitative function.

The *Mea-Anam*, *Sgan Karen* and *Tsung-thu wa*, *ba*, *mo*, *po*, *won*, form a well marked group. Its sources may have been the Manyak *wo-mi*, whence it might be communicated to a southern *Mea-Anam* or Karen dialect. But as the masc. qualitative has the same forms in Chinese names for the *Bull* and is one of the old Tibetan forms having a general application, this is doubtful. Comp. the Burman *nwa-m*, *Cho*; *nwa-pho*, *nwa-pho* Bull; Siamese *ngau tua pho* or *pa* Bull &c. The Karen name *n-mo* is probably a contraction of a term similar to the Burman *nwa-m*. The form *mo* is the Karen name for *Mother* and *po* *pu* *Mox* (generic). The most probable inference is that the Anam *ba* is a comparatively late derivative from the Irawadi province, (Tung-thu—Karen).

The Manipurian *muk* is a purely local application of the qualitative.

The true Tibetan root *chuk*, *chu*; *zva*, *zi* has a wide currency. The Bhotian form probably prevailed in Sitan also before it was replaced by Chinese terms, as although found in Serpa it is absent in Thopa, Changlo and Fakpa, and could not therefore have been communicated by them—at least in their modern condition—to the east Gangetic tongues, Mishni, Abor. From this group it has spread to the Holo, Guro and Naga vocabularies. The Singpho *kan-su*, distinct in form and with a *Gyaring* prefix in place of the Abor-Mishni *ma*, also favours a direct Sitan origin. Lastly forms similar to the Thochu *zya* and Manyak *zi* are found,

along with *chu*, *tso* in the east Gangetic group, *shya*, *sha*, *ja*, *shye*,—in Naga *si*,—and in the Yuma gr. *shya*, *sha*, *cha*, *si*, *tsi*. It is probable that the Abor-Naga broad form was received into the east Gangetic vocabulary from one of the earlier Sifan streams, and the Abor-Yuma from one of the later, after the slender phonology prevailed in east Tibet.

It is clear that the sibilants used for the *Goat* and *Cow* in the Himalaie glossary are forms of one root. The same variations are applied to both animals, *shu*, (with the variations *zyu*, *so*, *tso*, *cho* for *Goat*, and *su*, *thu*, *hu*, *tso*, *so*, *chuk*, *chu*, for *Cow*), *cha*, *sha*, *sa*, (also for *Cow* *ja*, *sha*, *shya*, *zhya*, and for *Goat* *chang*, *tsah*); for *Goat* the slender *tshi*, *ehli*, *chhe*, *dse*, *she*, *chheng* and for *Cow* *zi*, *si*, *shye*.

The two animals were therefore referred to the same species in the primary Himalaie zoology, and they were probably distinguished either by the forms of the sex qualitives or by separate attributives, descriptive of size, colour or other distinctive qualities, as in several of the Chinese names of animals. In the gradual concretion of the glossary in each dialect, each variety of the root would become a substantive name, rendering qualitives and definitives superfluous; and in like manner, varieties in the qualitives and definitives, on acquiring an independent substantive meaning, would render the older substantive roots in the compound redundant and sometimes cast them off. For example in Bhotian the *ra* form of the masc. qualitive, may have become distinctive of the *Goat*, and the lang form of the *Cow*; and when the sibilant substantive name itself took the two independent forms *chang* *Goat* and *chuk* *Cow*, distinctions in the qualitives were no longer necessary. In the latest stage of concretion and metamorphosis all these forms, *chang*, *chuk*, *lang*, *ra*, have acquired distinct substantive applications.

The Manipuresan *tem* appears to be a local modification of the sibilopalatal root, from the form *thu*, Angami *teho* (Lungke) &c. found in adjacent dialects. The same variety is used for the *Elephant* in Mishmi *da-ton*.

The Ultraindo-Gangetic names for the *Cow* and *Bull* of Chinese derivation appear to have been first acquired by the Lau tribe, and to have been communicated by them to a few of the other vocabularies, when they spread to the west and south.

6. BUFFALOE.

1. (II.) The Bhotian *ma-hi*, *ma-he* Lhopa, Lepcha, Murmi *ma-hi*, Serpa *me-shi*, Sunwar *me-sye*, Newar, Deoria Chutia *me*, Gurung *ma-i*, Magar *blain-sa*, Taying Mishmi *ma-ji*, Mrung *ma-shi*, N. and S. Tangkhul *shi*, appear to be Arian, Sanskrit *ma-hish*. But although the Buffaloe with its name appears to have been carried from India to Tibet, the name is probably pre-Arian and Himalaie in India. If the Arians found the Buffaloe there, they would be likely to adopt the native name. That *ma-hish*, *ma-shi*, &c. is Himalaie can hardly be doubted when it is compared with the corresponding Himalaie names for the Cow, *ma-shya*, *ma-shu*, *ma-hu*, *ma-si* &c.

2. (II.) (*c.*) M. Mishmi *ta-loi*, Jili, Champhung *nge-lui*, Mikir *che-long*, *je-lang*, Muthun *loi*, Jomboka *lue*, Maring *lui*, Manipuri *i-roi*, Songpu *wei-roi*, Kapwi *sa-loi*, Lohuppa *si-loi*, S. Tangkhul *se-lui*, [*se-loi* is applied to the Asi Gyal in Chittagong], Koreng *a-lui*, Maram *a-ghoi*, Angami and M. A. *ra-li*, Khoibu *ra-loi*, Kyau *cha-la-me*, Bongju *f-se-loi*.

This is the common liquid masc. root. The form *loi* probably spread southward from one Himalayan dialect (Mishmi or Singpho) to the Manipuri-Yuma vocabularies, in which it prevails, or from a southern dialect northward. As similar amplified forms are found in the Yuma group and Mon applied to the *Hog* *lent* &c. and *Monkey* *h'ait* (Kumi) it may have spread from this group to Manipuri and thence to the Irawadi and northward. The liquid element in the name of the *Horse* (whatever its etymology may be) takes the same form in Kasia, kalai and Bodo korai, gorai. The Kambojan name for the *Elephant* has a similar form *tam-rai*, *Chong ka-nai*, but this appears to be a derivative from the Irawadi *ta-loi Buffalo*. The form is probably of western Irawadi origin.

(b.) Anam *k-long-nuk*, (Mikir *che-long*) Sak *k-ro*, Ahom *kh-rai*, Lau *kh-nai*, Burman *k-ywai*, *k-wye*, *k-yue*, Kambojan *k-ra-ba*. From the Ahom, Sak and Kambojan forms the original appears to have been a form of the masc. qualitative similar to (a), *rai* &c. with the guttural prefix in place of the *ng* or *t* of the north Irawadi (Jili, Mishmi). The Kambojan combination is similar to the Kyan *che-la-ue*. In Sec. II of ch. V. I considered the Kambojan name to be Dravidian. If, as I now think, it is Himalaic, the question arises whether the Dravidian *karan*, *karavai* is not itself Himalaic.

(c.) Namsang *le*, Kasia *shin-reh*, Mon *pa-ren*, *p-riang*, *p-yen*. Similar slender forms occur for the *Goat* in Karen and Newar *le*, C. and S. Tangkhul *re*, Anam *de*; for the *Elephant* in Kambojan *re*; for the *Hog* in Mijhu Mishmi *leh*, and Mon *let*; and for the *Horse* in Abor, Burman *re*. The modification belongs to the later Sifan—Irawadi current. The Manyak *ding-mi* is perhaps connected with these forms.

3. (III.) (a.) Aka, Dophla *men-dak*, Abor *men-zek*, *men-jeg*, Mulung, Tablung *tek*. Possibly this is an archaic form of the liquid masc. root similar to *orak Hog*, *rat Goat*, *lak Elephant*, and *lak*, *nak Monkey*. But it is closer to an archaic form of the dental and sibilant preserved in names for the *Tiger* *tak*, *jik*. In the Bhotian *u* form of the same root as applied to the *Cow* final *k* is preserved, *chuk*.

(b.) Tengsa *tyang*, Nogaung *chang*, Tengsa *chang*. This is the form of the sibilant root found in the Bhotian *chang Goat*, Murni chyan *Tiger*, Lepcha tyan *Elephant*.

4. (I.) (a.) Deoria Chutia *me*, Assam *moh*, Garo *mat-ma*, Khari *a-pang*.

(b.) Limbu *sa-wet* (Burm. *wet Hog*), Kiranti *san-wa*.

5. Anam *ngiu*, Singpho *nga*, Jili *nga-lui*, Langkhe *na*, Khyeng *nau*, Kumi *pat-noh*, *pa-no*, *ma-na*, Karen, Toung-thu *pa-na*, *poi-nai*. With the exception of the Anam *ngiu* these forms appear to be all variations of the north Irawadi *nga*, which is identical with the Manyak form for the *Cow*.

Obs. No distinctive root for the *Buffaloe* occurs amongst the various names. They are the same substantive and qualitative roots that are used for the *Goat*, *Cow* &c. Some well marked groups exist. The Gangetic form, including the Sanskrit and Bengali, is the archaic Himalaic name for the *Cow* (*ma-chu*, *ma-su*, *ma-hu*, *ma-si* &c.). If any qualitative originally distinguished the *Buffaloe* from the *Cow* it has been lost.

Another group is the large Irawadi one in which the masc. liquid root has been diffused in the form *loi* &c. from some single dialect.

A second and smaller Ultratindian group presents the same root in a

later or slender form. It appears to be an Irawadi form (Mishmi—*Mon Nag*), and was probably communicated by Mon to Kasia and by Kasia to Nogaung Naga.

The Abor group preserves the substantive root in an archaic Tibetan form and the Nogaung and Tengsa forms appear to rank with it. These forms were probably used originally for the Goat and Cow in the east Gangetic dialects.

The labial names, with one exception, are confined to Assam and its borders. They appear to be remnants of the old Gangetic *ma-hish*, *me-shi* &c. (Nipat), the Deoria Chutia *me* being identical with the Newar. The Limbu *sa-wet* and Kiranti *san-wa* appear to be archaic, for they have the qualitative postfixed and not prefixed as in the prevalent concreted Gangetic word.

7. ELEPHANT.

1. (II.) (a.) The Bhotian wr. and com. Tibetan *g-lang-chen* is Lhopa *lang-chen*. The sp. *lang-bo-chen*, Harpa *la-mo-chen* is Serpa *lang-bo*, Murmi *lung-bo-chi*, Changlo *lung-pe-hi*.

(b.) Anam *ti-rang*, Kambojan *lam-rai*, *dam-re*, Chong *ka-nai*, Ka ruai.

Muthun loak, Joboka loak, Molung, Tablung lok-mu, Barmaan a-ne, Rakhoing nin, Kyau ni, Kasia *ing-nar*, Dhimul *nar-ia*.

2. (I.) Myna Mishmi *man-yong*, T. M. *amihac*, Garo *mong-ma*, Singpho *mag-mi*, Namsang puak, Maimai *sa-mu* (*Cow sa-muk*, *horse sa-grol*, *goat ha-meng*). Songpu *moi-pong* (*cow moi-wun*, *buffaloe moi-rhoi*), Kappi *ta-pong*, Korang *cha-pong*, Marau *m-pong*, Luhappa *ma-vu*, N. Tangkhul *ma-pu*, Anam *voi*, *woi*, Champa *ta-mum*, Khying *mwi*. These are similar to forms of the masc. labial current as names for the *Cow*, *Goat*, *Horse* &c.

(b.) Garo *na-p-lo*, Champhung *p-lo-bi*.

(c.) The slender form is applied in Mon to the *Buffaloe p-ren* &c. Comp. also Songpu *moi-roi*.

3. (III.) T. Mishmi *da-ton* (Brown), Lepcha *tyan-mo*, *teng-mu*.

4. The Chinese *siang*, *tseung*, *siong*, *ch'ho*, *sio*, *tiang* is found in the Lau dialects *chiang*, *tsang*, *sang*, Jili *tsang*, Burman, Mon *shen*, Mon *chuein*, Rakhoing *san*, Kyau *sang-hung*.

5. (III.) The Karen *ka-tsho*, An-gami and M. A. *tsu*, S. Tangkhul, Maring *sai*, Khoibu *ka-sai*, C. Tangkhul *sa-ka-tai*, Shindu *ma-shey*, Kumi *ka-shai*, Luigko *tsai*, Newar and Chepang *ki-si*, may either be Chinese or Himalaic. The form of the root, the prefixes, and of the range the terms appear to show that some of them are native application of the root for *Cow* &c.

6. The Sanskrit *sita*, *site* is current in Abor, Sanwar (*soda*), Tengsa *suti*, Nogaung *shiti*, Khari *sati*. Both this term and *gaja* (= *ga-ja*) appear to be Himalaic.

7. The Hindi *hati* is used in Aka, Bodo, Limbu, Kiranti, Murmi, Magar, Gurung, Mikir.

8. Sak *u-ku*.

Obs. The Tibetan *chen* is probably of modern Chinese origin.

The most common native term is the masc. Himalaic labial, in the archaic *n*, *o* form (Bhot. *po*, *ba*, *bu* &c.). The *-k* forms appear to be very ancient, resembling those for the *Hog*. The nasal were probably formed from them.

The Anam *voi*, *woi*, is the Songpu prefix with the root elided.

The Naga *look, lok*, is a remnant of an archaic mase form. Similar forms survive in names for the *Hog*, and this may indicate a special connection.

8. HORSE.

1. (III.) (a.) The Bhotian *r-ta, ta*. Takpa *té*, is current in Serpa, Lhopa and Murni *ta, tah, tha*; and the Tiberkhad *shang, shong*, is the same root. Karen *ka-the, ka-se, thi*. Khyeng *tsa*, Kyan *sha*, Kambojan *so*.

2. (II.) The *ró, bo-ro, b-ró* of the Sifan dialects, *rhí, ryí* of Horpa, is the most common Ultraindo-Gangetic name,—*hu-re* Abor, *sa-la* Newar, *sa-rang* Chepang, *rang, rang* Milchanang, *kam-rang* Singpho, *m-rang, m-yen* Burman, *rang* Kyan; Mishmi *ga-re, g-rue*, Abor *gu-re*, Tengsa *ku-ri*, Nogaung *ko-r*, Khari *kung-ri*, Angami *ki-r*, M. Angami *chu-kwi-r*, Manipuri, Champhung *sa-ga-l*, Koreng and Maram *cha-kon*, Songpu and Kapwi *ta-koan*, Kumi *kaungo*, Lohappa *si-kui*, S. and C. Tangkhul *sa-koí*, [Rakhoing *k-ray*, Burman *k-re*, Mon *k-yeh*, Kasia *ka-lai*, Bodo *ko-rai, go-rai*, Kiranti, Magar, Gurung, Sunwar, Bengah, Hindi *gho-ra*, Changlo *ko-r-ta*, (ta 1), Sindhi *ga-ri*, Kashmiri *gu-ri-ri*, Tirhai *ku-ra*.]

3. (I.) Maring *puk*, Khoibu *sha-puk*, S. Tangkhul *sa-puk*, Kumi, Lungke *ka-phuk*, Namsang *mok*, Muthun *man*, Joboka *mang*, Mijha Mishmi *kom-beng*. (See *cow, elephant, hog*).

Tablung and Mulung *ko-wai*.

4. Dhimal *on-hya*, Lepcha, Limbu *on*. (? 2).

5. The Chinese *ma* is current in the Lan dialects and in Anam.

9. TIGER.

1. (III.) The Bhotian and Horpa *tag, tak*, is Lhopa *tah*, Serpa *jik*, Milchanang and Tibarkhad *tar, thar*.

2. (III.) (a.) Abor *si-mio, su-myo*, T. Mishmi (*Cat, si-mi* Bhot.).

(b.) Bodo *mo-chu, mi-sah, ma-su*, Garo *ma-tsa, ma-chu*, Sunwar *gu-p-sa*, Chepang *ja*, Karen *ba-thao, ba-sa, bo*, Jili *ka-sa*, Namsang *sa*, Mulung—Tablung *sah-nu*, Joboka *cha-nu*, Muthun *chia-nu*.

(c.) Lepcha *sa-thong, si-tong*, Newar *dhum*, Murni *chung, chyan*, Gurung *chen*. This is an archaic form for *cat* Manipuri *gr. tong, tung, tu, &c.*, Magar *thu*, Horpa *chu*; and the Maram *tok*, Anam *sok*, show it to be a variation of the Tibetan *tak, tag tiger*.

(d.) Anam *ho, ong-kop* (Brown), Lau *su, sua*, Maring *hum-wi*, Songpu *kam-hang*, S. Tangkhul *ham-pu*, Khoibu *hum-pwi*.

3. (IV.) (a.) The guttural root (primarily applied to the *dog*) is very common. Tengsa *khu*, Khari *a-khu*, Angami and M. A., Kapwi *ta-khu*, Koreng *cha-kwi*, C. Tangkhul *sa-kwi*, Maram *khu-bui*, Champhung *a-khu-bi*, Lohappa *sang-khu*, N. Tangkhul *sa-khwn*, Shindu *cha-kom*.

Nogaung *kayi*, Manipuri *kai*, Kumi *t-kai, ta-kae, ta-gain*, Kyan *kiah*, Lungke *tehek-ke* (? *che-ke*), Mikir *ti-ke*, Limbu *ke-va, ke-ba*, Kiranti *ki-wa*, Sunwar *gu-p-sa*, Anam *ong-ko-p* (Brown), Ka *dea*.

Silong *p-nuk*.

4. Changlo *kai-la*, Kambojan *k-la, ki-la*, Mon *k-la, k-ya*, Kasia *k-la*,

* Many of these names are evidently Seytho-Dravidian (Hindi.) and not Seytho-Himalaic, but it is difficult to draw the line. Those within brackets appear to be Hindi. See ch. v sec. 11.

Magar rang-ho, Singpho sa-rong, Lau si-ra, Burman ni-ra, Chong ro-wai. (See *Dog*).

10. MONKEY.

1. (a.) (II.) The Bhotian wr. *s-p-re-bu*, Gyarung *she-p-ri*, Takpa *p-ro*, is current in Lhopa *p-ya*.

(b.) Serpa *rho*, [*ta-rho Cat* Gyarung], Chepang *yukh*, Kumi *h'lait*, Bado *ma-kh-a-ra*, Garo *ma-kh-re*, Silong *k-lak*, Muthun *mai-nak*, Joboka *me-nak*. Toung-thu *tan-lam*, Lau gr. ling, Kasia *sh-ri*. The Newar *mako* is probably derived from the Bado *mokhara*.

2. (III.) The sp. Bhotian *tyu*, Horpa *zun-dé*, Thochu *mai-si*, is found in Maling and Tablung *si-wa*, Tengsa *su-shi* [*Elephant*, *su-ti*], Changlo *ja-la*, Kiranti *ho-la-wa*, Nagaiung *shi-tu* [*Elephant*, *shi-ti*], Khari *hi-sha*, Kapwi, Maram *ka-zyong*, Kaceng *ta-zyong*, Manipuri, S. Tangkhul *yong*, Maring *yung*, Lühappa, N. & C. Tangkhul *na-zyong*, Khoibu *ha-zyong*, Khyeng, Lungke *yang*, Burman *m-yauk*, Kyau *juang*, Kambojan *sua*.

3. (I.) The labial root is found in Mijhu Mishmi *muh*, Taying Mishmi *ta-nium*, Gurung *ti-myu*, Murni *mang*, Hindi *mai-mum*, Drav. *manga*, *mange*, Sunwar *mora*, Lepcha *sa-heu*, Anam *wun* (Brown), Abor *si-bie*, *si-be*, Aka *le-be*, Singpho *we*, Jili *ta-we*, Namsang *veh*, Garo *han-we*, Limbu *so-ba*, *cho-ba*, Mikir *hi-pi*.

4. Angami and Mozome A. *te-kwi*, Songpa *a-koi*, Anam *khi*. The same forms are used for *dog*, *goat*, *tiger*, *horse*.

5. Mon *ka-nwe*, Dhimal *nho-ya*.

11. FISH.

1. Nga, nya (Bhot., Takpa) is very common in the southern vocabularies. The Gyarung form *ngyo* occurs in Abor *e-ngo*, Tengsa and Nagaiung *a-ngo*, Kumi, Khyeng *nga*, Kyau *ngwau*. The Angami *kho*, Mikir *ek* are related to these. The change of *ng* to *k* is common to Angami with several of the Manipuri dialects *kha*, *khai*, *cha-kha*, *a-khai*, *khi* &c. with Anam, Mon and Nicobar *ka*, and Kasia *da-kha* (*a-k* Mikir). The loss of the nasal occurs in Pwo Karen,—Sgau *nyá*, Pwo *ya*.

2. *izhi* Thochu. This Scythic word is only found in one of the published Gargeto-Drawady vocabularies, but it is Indonesian. The Magar *she* of *di-she* has the same root.

3. *yu* Manyak. Chinese *yu* Kwan-hwa, *yue* Gyarung.

The Gyarung usage of preposing the word for *water*—*chu-nyo*—is an archaic Asiatic one, Scythic, Semito-African &c. It is preserved by Magar *di-she* (*di water*). See also *Snake*.

The Murni *ter nya*, Gyarung *tan-nga* appears to have the dental prefix in one of its Gyarung forms.

The Taying Mishmi *tan*, *ta*, may have lost the root, or only preserves it in the *n*. *ta* being a common pref. in this vocabulary. The Toung-thu *de-dan*, Mru *dun* are evidently related to *tan*, and suggest its being a form of the *la*, *ran* root.

Lau reverses the Tibetan application of *nga*, *ngo*, *ngu* and *la* &c., using the former for *snake* and the latter for *fish*, *p-la* Ahom, Siam, *p-la* Khamti, Laos. The Kambojan group has the same root for *fish*, *t-rau*, *t-rai*, *t-rei* Ka-mer, *t-re* Chong, *me-l* Chong. Anam follows the Tibetan *u-ra* *ran*, *sa che*, (*t-ran* *ha*). The *a* form of the root is peculiar to the Mon-Anam group—the Tibeto-Burman having *u*. It is probably related

to a Manipuri form, *ma-run* Kapwi, *pha-run* Khoibu, the normal form being *ru*. The Anam luon *eel* is a similar form. The Mru form *ta-roa* resembles the Kambojan. The *l, r* root appears to be that for *river, water*, in archaic forms. See *Snake*.

12. SNAKE.

1. The broad wr. Bhotian *s-b-ru*, Manyak *b-ru*, Serpa *d-ru* (whence *d-en* Bl. sp., *b-en* Lhop. Lep.) is preserved in Takpa *m-ru*, Mikir *pha-ru*, *pha-rei*, Maring *ph-ru*, Khoibu *pha-run*, Kapwi *ma-run*, Tengsa *pha-lu*, Lahu *pha-ru*, N. T. *ph-ru*, C. T. *ph-ru*, Kuki *ru*, Lungke *ru*, *ru*, Sakhoing *m-ru*, Kyau *m-ru*, *ma-yek*, Burma. *m-ywe*.

Anam *ru*, *t-ru*, (*eel* luon) Mon *tha-run*, Mru *ta-roa*, Singpho *la-pu*, Champhung *ri-nam*, Maram *sa-na*, Koreng *ku-nu*, Moz. *thi-nhye*, Yerakala *tu-na*.

Manipuri *li*, Champh. *ri-nam*, S. Tangkhul *ma-ri*; (tu-*li* *river* Maring, *ri* *water*, *nam* *water, river*).

2. The labial is found in Dophla *ta-bug*, Aka *ta-buk*, Garo *du-pu*, Doria *du-bu*, Gadaba *bu-du-bu*, Bodo *ji-bu*, *ju-bu*, Dimak *pa-nhu*, Taying *ta-bu*, Sak *ka-pu*, Singpho *la-pu*, Samsang and Malung groups *pu*, Nagaung *pu-r*, Magar *bu-l*, Khari *e-bu*, Angami *tha-ta*, Kumi *pu-wi*, Khyang *pu-wa*, Mrung *tsu-bu*, Sunwar *la-sa*, Marmi *pu-ku-ri*, Gurung *lu-gu-r*, Abor *ta-bi*, Garo *cha-pi*, Newar *bi*, Roling, Kamboj. *po-s* (Sunwar).

3. Dravirian *pa, ba* (root).

4. Mijhu *zhu*.

5. M. Kumi *ma-khui, ma-kwi*, S. Karen *gu*, P. K. *w-gu*.

6. Limbu *o-sek*, Kir. *pe-cham*, Savara *ja*.

7. Gondi *ta-ras*, Konth *so-raso* (prob. 1 with a postf. *sa-ra-so*, comp. *tau* Anam, *bu-sa* Sunwar).

8. Lau *nga, ngu*. (See *Fish*).

All the names for *snake*, with the exception of 2 and 7, appear to be forms of the common roots for *river, water, ru* being an archaic form; that is, the root has been lost, and the descriptive or qualifying word only preserved, as in many other current vocabularies, including names of animals. The Tibetan root was probably the labial, the forms and distribution of which show it to be radical, and not merely the Tibetan *pye* with the *r* root elided. The Marmi *pu-ku-ri*, Gurung *blaga-ri* (*ta-bug* Daphu), are examples of an archaic form of the root, followed by the form of the liquid root for *water*, common to Burman, Magar &c. The Singpho *la-pu* may be a similar combination. In the Garo *du-pu*, Gadaba *bu-du-bu*, Yerakala *tu-na, du, tu* may be *water* and not merely a prefix.

12. BIRD.

1. *a*. The old Bhotian *byu* is now an exceptional form. It is preserved in Indonesia, *pio* Sambawa. The *u* form is found in Lhopa *bya*, Takpa *pya*, Taying *m-pia*, Milchaung *pie*, *pea*, *piatah*, Marmi *na-mya*, Newar *na-mya*. The Gyarung *pye-pye* is the only slender Tibetan form. Comp. weng Kapwi.

With the old Bhotian form are connected the Singpho *wu*, Naga *the-vu*, *vo*, *o*, Kumi *ta-wu*, Limbu *bu*, Lepcha *pho*, Chepang *moa*.

To the form in *a* are related the Mijhu *wa*, Yama *wa*, *la-wa*, *ta-wa*, *ka-wa*, *tu-wa*, Tونغ-thu *a-wa*, Sak *wa-si*, Chepang, *fwel, wa*.

2. The Thochu *mar-mo* (*wo*, from the analogy of other vocabularies, being probably the def.) has direct Scythic affinities. It is an archaic

Seythic liquid form of the labial root like the dental form, and like it is also Iranian and Dravirian. The pure root appears to be radically *feather, wing*. Both the liquid (-n, -l, -r) and the dento-gutural series (-t, -k, -s &c.) are current in Seythic, Indo-European and Dravirian. *Feather* pal Korea, pil, pul-an Yenis., pil-ga, pil-ga, pyd, pud, bud al Ugrian, (pul Tibet, mun Singpho &c.), ph-ua Lat., wot Armen., par, pal-ah, pad, pakha, pakh-na &c. Sansk., Beng., Hind., paru-ku; bu-za Drav. *Wing* bar, bol, pauk, Hind. &c. &c. *Bird* German, vo:-el, Lat. avis, Eng. bir-d, Sansk., Beng., Hind. par-indu, pata-ka pakh-eru, pakh-yi, Drav. par-ra, para-wei, pul, paki, pita:

The Angami para, peru appears to be Dravirian and not Thochu. There is no other example of the Thochu vocable, and other Dravirian vocaldes are preserved in the Ultraiidian-vocabularies.

Allied vocables are current in Malayo-Polynesian—pio Sambawa (byu old Bhotian, pia Takpa &c.), bau Kissa, pao Mille, Batan fowl a-pa, Polynesian fowl moa (Chepang).

The Tagalo i-ban, Murray I. a-bar, Erub i-bu are probably contractions of the Malagaso-Polynesian vuru, vuru-na, buro-ng &c. which is related to the Seythic pul-an &c.

The Tasmanian mura, Lampong puti are Dravirian, Paser has piatu fowl, in the Abor form putah.

The Binua pake is Dravirian or Bengali.

The same root is current as *wing, feather*, and *egg*, the specific conjoined roots having been dropped. In many of the smaller vocabularies these words are wanting. But the larger ones furnish undoubted affinities.

1. The labial is *Egg* in Abor a-pin (old Bhot. byu, Sambawa pio, bird), a-pa, Daphla pa-pa, Aka pa-puk, Kambojan punr, Koreng pa-bum, Murimi phum, Corung phung, Sunwar ba-phu, Moa kha-pa, Male kir-pan, Thochu ki-west, (Naga-Nipal vu, bu, wu, va, wu &c. bird, Polynesian moa fowl, Malayalam pai fowl, Gyami a-phui bird). It is *Feather* in Chinese mo, bo, mau, Burman mui, kumi a-moi, Singpho mun, Changlo kha-phu, Mikir ar-weng (with mo bo comp. the Tibeto-Ultraiidian byu, bu, wu &c. bird; with mui, moi the Gyami a-phui, bird, Pol. bui, foi, egg; with ar-weng the Kapwi weng bird). *Wing* does not occur even in Mr. Robinson's vocabularies, and as *Feather* is also wanting in Mr. Hodgson's, the root will probably be found to be common with both of these meanings. Siamese has pa wing. The Indonesian bang Madura, (tir-bang to fly Malayu &c.), pai Buzi, Beligini, baka Kissa, pak, pako Philippine, appear to be partly Tibeto-Ultraiidian and partly Dravirian.

Examples of the Seytho-Iranian and Dravirian forms current for *Bird, Feather, Wing*, have already been given, and it will be seen from the forms now cited that the Tibeto-Ultraiidian labial for *bird* is immediately connected with the Chino-Burman forms for *feather*, and not with the Seythic vocables.

For *Duck* the dental form is Seythic pot, pont, bato, Semito-African bato, bit-ak, ma-bata &c., Indo-European pat, bat, bat-ak &c., Dravirian bato, bud-sh, Indonesian patu, bati-ki &c., and Mon-Anam vit, pet, the last being probably an archaic Seythic form, as it is also Semitic. The duplicated radical is found in Turkish papi, baby-sh, babu-sh. A similar form is common in Indonesia bebe, pipi, bili-ko &c. It is probably Tibeto-Ultraiidian. The word is not included in the small vocabularies. Bibiko, bebek &c. were probably formed by a common Indonesian mode

of reduplication from *bik*, *bek*, in which case the form is Mon-Anam, *vit*, *pet*. Naga has a similar double form *pak-mak*.

3. The current Bhotian *chya* is Chinese *tsioh*, *chiao*, *tian*, *chio*, *tia*, &c. The Horpa *gyo* appears to be another variation of the Chinese. The Mishmi *isa*, Mon *kha-ten*, Naga *a-zah*, *u-so*, *u-zu*, Manipuri *ma-sa*, *ma-tsa*, *ma-cha*, *a-ta*, *o-ta*, *ma-to*, *nga-the*, Karen *tho*, Kiranti *chong-na*, Dhimal *jiba*, Serpa *jha*, Newar *jhang*, appear to be all variations of the Chino-Tibetan vocable, which is probably of later diffusion than the labial.

The Abor *patang*, *petang*, Dophla *pata*, Aka *putah* appears to be the dental and sibilant root (3) with the labial prefix. It may possibly be an archaic Dravirian form of the labial root not derived from Tibet, but having direct Ugro-Iranian affinities. [See App. B to chap. V, *Bird*].

4. The Jili *ma-chik*, Manipuri *u-chek*, *u-thik-na*, and the Sunwar *chi-ra*, Anam, Binua *chim*, Mon *ka-chim*, Kasia *ka-sim*, Gond *sim*, Si-long *sison* [Komreng *sisu*], appear to be archaic Chino-Tibetan forms, distinct from the preceding, and of earlier diffusion. Kwang-tung preserves the final *k* in its *tsuk*.

The Manyak *ha*, Naga *au-ha*, Khyeng *hau*, is referable to *bhya*, *wa*, *va* or to *chiao*, *chya*, *sa*. The latter was probably its original form.

The Irawadi *thik*, *chik* is found in Indonesia, like *Tilanjang*. The *Sak-tiu* preserves the Chinese form *tio*, *tian*.

The same root is found in the Gond *ite*, *titit*, and as *Duck* in Dravirian *ite*, Burman *ute*, and Indonesian *itik*, *iti*, *itè*, *titi*.

As *Bird* the root is archaic and widely diffused. Scythic *doi*, *tirte*, *tari*, *tschir-pu* &c.; Semito-African *tair*, *dido*, *dea*, *diary* &c.; Sanskrit *ati*.

The final *m* is included in the Scythic range of finals, *ziaf Aino*, *sibe-chu*, *shobo*, *shub-un* &c. Mongolian. In Samode the same form is *duck*, *shibu*.

For *Feather* the *-k* form is common to Turkish and Tibetan, *a-sag Turk.*, *shak-pa Bhot*. The pure sibilant is Japanese *asi* (Sansk. *ati bird*) and Korean *zo*.

5. The exceptional Maram *a-roi*, Songpu *u-roi*, appear to be N. Dravirian, ure *Mundala*, *orak Uraon* (*urak* &c. *duck Turkish*).

13. ANT.

The Bhotian *g-rag-ma*, Gyar. *ha-rok*, and Takpa *rhok-po*, preserve the same archaic form. The Abor *ta-rak*, Aka *ta-rak*, are referable to the Gyarung branch. Sunwar has the Bhotian *rag-me-chi*. In the Burma-Gangetic dialects the guttural final is nasalised and the prefix is generally the labial *as* in the Manyak, *ba-rak*. The *a* vowel, variable *i*, *e*, is also more common than *o* or *u*. The Mishmi *a-rang* is an amplified form found also in Burman *pa-rwak-chhit*, *pa-rwet*, *pa-yuet*, the first of which preserves the guttural. The form *lang* is Abor (from *rak* as in Aka, *rah* Manyak) Jili, N. Tangkhal and Maram. The slender *ling*, *lung*, is Manipurian and Yuma, *mi-ling*, *ma-ling*, *ba-lin*, *pa-lung*. The more prevalent Burma-Gangetic term is a distinct root, *chi*, *tsi*, *tsip*, *tik*, *chu*, *teng*, *ching* &c. *cha*, *tuk*, *tang* &c.

WORDS OF ART.

	House	Village	Road	Boat	Arrow	Iron	Salt
Bhot. wr.	khyim	yul	tsbo lam	<i>g</i> -ru	<i>m</i> -dah	<i>l</i> -chags	tsha
— sp.	nang	thong	lam	koa	da	chhya	chha
				syen			
Horpa	hyó	rha	va ché	<i>gr</i> a	<i>l</i> -da	chu	chhá
Thochu	ki'	we-kha	gri	plya	já	sor-mo	ché
Gyarung	chhem	wo-khyu	tri	<i>b</i> -ru	<i>k</i> i-pi	shom	chbe
		tu-khyu		<i>ta</i> - <i>b</i> -ru			
				<i>sha</i> - <i>b</i> -ru			
Manyak	nyé	hu	rá	<i>g</i> -u	<i>m</i> -a	shi	ché
Takpa	khem	yü	lein-dang	<i>g</i> -ru	<i>m</i> -la	lekhi	tsa

1. *House.*

1. The Bhotian khyim, Takpa khem, preserves the full form of the most common southern name. It appears to be one of the primary native roots of the family. It is not Chinese, and although the Seytho-Iranian glossary like Chinese has the guttural root never takes the *m* final, the common forms being *k-r*, *k-l*, *k-t*, *k-d*, *k-k*, *k-sh*, *k-th* Ugric, Kamsch., Pasthu, Hind. &c. The Milchanang and Tiberkbad keum, T. keung, (Kinawari Bhotian kung, Serpa khang-ba) suggest a connection with the Chinese heung *Village* *K-t*, hiang *lu* *K-h*. Chinese for *house* has uk. kwei &c.

2. The sp. Bhotian nang, Manyak nyé (=nyek) may be remotely connected with the liquid root found in Chukchi, Japanese, Caucasian, Dravirian, Iranian and African.

Southern forms.

1. The guttural is the most common of the Southern roots, and it takes many contracted and softened forms. The full form is retained by Jili kim and Kiranti Khim. Milchanang, Magar and Aber have archaic *n* forms, *e-kum* Ab., keum M. T. This appears to be also a local Bhotian form, one voc. giving *si kung*. The Namsang, Kumi and Aka forms appear to have been similar to the Aber; and the Mulung, Joboka and Mikir may be referred to the group. The southern Irawadi varieties have *n*, Sak retaining the full form *kyin*. Khyeng and wr. Burm. preserve *m*.

The guttural is lost in some of the Manipuri dialects, most of the Yuma, Burman, and Pwo Karen.

The final consonant is lost in several of the Naga dialects, Sgau Karen and Mon.

The Newar chhen appears to be referable to the Gyarung chhem. The Magar yum belongs to the Abor-Milchanang band. It may be from a local full form like keum Milch., or it may be derived from the eastern extremity of the band where similar forms occur. Tengsa has yum *village*. (See *Village*).

e-kum Abor, hum Namsang, um Kumi, u Aka; ham Mulung, Joboka, hem Mikir.

kim Jili, yim Manipuri; shim Luhuppa, shin N. C. Tangkul, isim Khoibu, chin Mering, yin S. Tangkul, in Kapwi, eing Burm., Khyeng, Lung-khe, Kumi, in Kami, ing Kyau, in Burman wr., Khyeng, yen Pwo Karen, hi Sgau K., he Mon, kin Mru, kyin Sak, cha-ki Koreng,

kai Songpu, Maram—final *ai* for *i* as in other words,—*ki* Tengsa, Nogaing, Angami, *a-ki* Khari, khim Kiamti, dhim Murmi, khi Sanwar, him Limbu, chhen Newar, yum Magar.

keum Milch., Tiberkh., keung T., kim M., khang-ba Serpa.

2. The Manyak *nyè* and sp. Bhotian *nang* are found in nagon, nak Garo, noo, nau, na Bodo, nok Muluog, Tablung, nya Deoria Ch., ula, yn Anam. The Anam and Deoria Chutia forms are connected. The others are more faithful to the archaic Tibetan forms. The root is also used for *village* (see *Village*).

3. *b-li* Mijhu M., *li* Lepcha, lan Toung-thu, *a-ru* Champhung, ren Ahom, reuan Siam, heun Lau, hun Khanti, hon, ong Taying M., ron Goud, ora, oa uran Kol, *er-pa* Uraon, arra, ar-*sh* Toda, illa-*m*, illu, illa Tamil &c. (See *Village*).

This root is used for *village* and it appears to be the same as the preceding. The variety of forms and the mode of its distribution, show it to be very archaic.

The Toung-thu lan is closer to the Bhotian *nang* than the other forms.

The Khyeng *nang* *village* has the Bh. form, and in Anam and Magar it becomes lang. Abor has long, lung, Singpho reung, Angami rana &c.

The Siamese reuan, Ahom ren, preserve the full form of the Lau fun. The vowel connects it with the Singpho reung *village*, but the Rakhoing rwa, (Horpa rhava) is probably more faithful to the original form.

The Champhung *a-ru*, and the Mijhu and Lepcha *li*, appear to be both referable to the Lau reuan, ren &c.

4. *ka ting* Kasia, teng Kuki, tin Garung, (? dhim Murmi). This is a Chinese word for *village, town*, and it is current with that signification in Taying M., several Naga dialects, Sak, Kiamti and Newar. (See *Village*).

5. *pe-tah* Kambojan, *nta* Singpho, cha Dhimal, sang Manipuri. This appears to be a distinct group from the last. It is probably referable to the broad Chino-Tibetan form for *village, town*, tsho, thong, so, in Garung sa. The Gyami shiang and Sak pa-syang *house* resemble the southern forms.

2. *Village.*

1. The Bhotian tsho, thong is Chinese, tsun, liang tsun Kwan-hwa.
2. yul Bh. wr. (yul tsho), yu Takpa yul Serpa. Mongol. oil.
3. rhava (? rha-ra) Horpa. Comp. ala, ola, ula Ugrian (Cherenish), ail Mong., and the liquid root for *house*.
4. Thochu we-kha, Gyar. wokhyu, tu-khyu. Many. lau. Probably the guttural is the same root that is used for *house*.

Southern forms.

1. The broad form is very rare, song Garo, nam-so Murmi, na-sa Gurung.

A slender form is prevalent but it has a distinct Chinese source.

ma-tyung, ma-ting Taying M., ting Muthun, Muluog, Tengsa, ting-khua Jobaka, ching Muluog, thing Sak, a-ti-gu Deor., teng Kiamti, de Newar (*house* tin Garung, *ka ting* Kasia, teng Kuki). Chinese *town, city*, ching K-h., shing K-t.

2. 3. *ma-rong, me-rong* Singpho, nkha-yeng Mijhu M., *da-long, do-lung* Abor, dung Toung-thu, rong Mikir, *sh-nong* Kasia, nang Khyeng, lung

Anam, lang-ha Magar, rana Angami, a-rane Moz. Ang., rwa Bakh., ywa Burin.

ram Champhung, C. S. Tangkhul, ram-khu Luh., rahang N. Tangkhul, nam Songpa, nam Kapwi, Koreng, Khyeng, i-nam Maram, nam-pum Aka, nam-so Murmi, na-sa Gurung.

These forms have several distinct affinities with Tibetan. The Khyeng nang, Anam lang &c. resemble the Bhotian nang *house* more than the forms now current in Tibet for *village*.

The Moz-Ang., Manipurian, Khyeng, Aka and Murmi rane, ram, nam &c. is a group referable to the Horpa rava, of which the Rakhoing rwa is a contracted form.

The Tengsa yam, Nogaung yum, Khari a-yim, Khoibu yon, might all be referred to the liquid root. But as they are identical with soft forms of the guttural root used for *house*, it is probable that they take their place with them. Comp. *house* yum Magar, yim Manipuri, yen Pwo Karen &c.

The Maring yul is identical with the Bhotian yul, and the Khoibu yon is probably connected with it.

4. ting-khua Jobaka, khul Manip., Champhi., ram-khu Luh., khui C. Tangkhul, ko Kyau, koo Shindu, kwa Lungke, Mru, koh Mon, a-ti-gu Deoria C., go Dophla, ha Namsang, n-kha-yeng Mijhu M., ke-p Male, ga Chentsu, yiu-go-ma Gadaba.

kyong Lhopa, Lepcha, gaun Sunwar, gang Newar.

The Mijhu kha, Namsang ha, may be archaic forms, of direct Tibetan origin (kha Thochu). The others have the u of Gyarung and Manyak.

The Lhopa kyong and the cognate Nipal forms appear to connect these words with the guttural names for *house*. Comp. keung Tiberkhad, khang Serpa.

5. nuang Siam, mung Lau, ban Abom, Lau, Siam, man Khamti, vang Kami, a-vang, a-wung, wang Kumi, ta-wun Pwo Karen, tha-wo Sgau, nam-pum Aka, bang-phe Linbu, n-ba-t Jili. The lab. is Dravirian pe-da Uraon, ha-tu Kol, pa-tti, ha-tti, pa-tti, ha-tti, mor-t, mo-d, man-de, mau-du, man-d S. Drav. (*House* manei, maue, pei, vu-du ui-du, vi-da). The Jili ba-t preserves one of the Dravirian forms, and the more com. man, ban &c. the other. The root is probably connected with the Chinese fang tsz. *house* K-h. Samade has ma, mat, men *house*, mar *village*.

3. Road.

1. The liquid root is Chinese lu, lau lu K-h., lau Hok-kien. The Bhotian lam, and Manyak ra, are variations of one form [=lam, lak], from the com. range of the final cons. It is probably a distinct archaic form. The root is one of the widely diffused ones of the ancient Asiatic glossary. Semitic *ha-ram*, *a-ram* &c., African *ji-ra*, *so-la* &c., Malagasy *lala-na*, *lala-mbe* (path-great); Georgian *sha-ra*, Pers. *sa-rak*, *rah*, *re*, Pashtu *lar*, Kol *ho-rah*, *ho-ren*, *da-ha-ri*, Drav. *sa-di* &c.

The Thochu *g-ri*, and Gyarung *t-ri* appear to be connected slender varieties. The Takpa lem is a modern one of the Bhotian lam. The -m form thus appears to be the distinctive one of Bhotian, and the -ng and -k of the Sitan dialects. The last is probably archaic, rak Many., rik, Thochu. The Persian and Georgian *rah*, *ra* are referable to such a form.

2. *ché* Horpa. Unless this root be Scythic it is exceptional.

The word is not given in most of Klaproth's Scythic vocabularies.

1. The liquid is the common southern root.

The Bhotian form *lam* is found in Singpho, Burman (also *lan* sp.), Kumi, Khyeng, Kyau, Kami, Sak (*lang*), Kasia *lan-ti*, Mon *ga-lan*, Manipuri, Maram, Champhung *lam-pi*, Kapwi, Khoibu *lan-pwi*, Korong *m-pwi*, Maring *lam*, the Naga dialects (save Khari and Angami), Nogaung *lem-ang*, (Takpa), Tengsa *ung-lan*, Abor *lam-bou*, *lam-te*, Dophla *lam-bu*, Aka *lam-tau*, Garo *rama*, *lam*, Bodo *lanna*, Dhimal *danna*, Mru *tama*; Serpa, Lhopa, Limbu, Kiranti, Magar *lam*, Sunwar *la*, Lepcha *laum*; Chepang *liam*, Mijhu *k-lo-ong*, Newar *lon*, Jili *tang-long*, Siam *thang-don*.

The slender Thochu and Gyarung form *ri*, *ri* resemble the Khari *ndi*, Srau Karen *k-le*, (Thochu *g-ri*), Toung-thu *k-lai*, and Taying Mishmi *alyim*.

Takpa *dang*, Anam *dang*, Lau *fam*, *tang*, Siam *thang don*, *sa-non*, *tha-thang*, Jili *tang-long*, Toung-thu *k-lai-tan-tha*, Pwo Karen *phun tha*, Mon *dan*. It appears to be Dravirian, *tang-ora* Savara, *da-ha-ri* Uraon (*ha-di* Karnat., *sa-di* Tuluv., *sa-ri* Gond &c.), *do-va* Tulug., *da-da* Irula, *da-ri* Telugu, Badaga, Kurumba, *al-da-r* Toda. The sibilant Songpa *chang*, Luhuppa *sang-va*, N. Tangkhul *som-phu*, C. T. *som-bui*, Angami *chab*, Deoria Ch. *tsa-gu*, Mikir *toar* appear to be referable to the dental.

The Murmi *ghyam*, and Gurung *kyan*, are probably related to the Gadaba *kung-oru*, Yerukala *ye-gi*.

Pwo Karen *phun tha*, Toung-thu *ta-phu*, Mon *hha-pan*. Dravirian, *va-zhi*, *ba-te*, *pa-de*, *be-ic*, *ba-t*, *pa-ho-ri*, *mo-r-g* (varying to the aspirate and sibilant *ha*, *sa*).

The Kambojan *chirada* may be Arian.

Ons. 1. The Bhotian *-m* form is the most prevalent, but the *n* forms cannot be radically separated from it.

2. The labial postf. connects the Abor and Dophla with the Manipurian forms.

3. The Thochu and Gyarung slender form is only represented by a Karen name.

4. The Anam and Lau names are connected with the sibilant and dental forms of a group which includes Manipuri and Naga dialects as well as Jili and Takpa.

5. The *k* prefix is preserved in Thochu, Karen, Mon, Toung-thu, Murmi, Gurung.

4. Boat.

1. The principal root is *ru*. The guttural pref. is common to Bhot., Horpa, Manyak and Takpa; the labial to Thochu and Gyarung. The only variation of the root is in the substitution of *a* for *u* and the softening or eliding of the consonant. The Horpa preserves the original form of the Thochu of *ya ph-ya* (for *ph-ra*).

2. The sp. Bh. *koa* may be a contraction of a form like *k-rua*.

3. The Bhot. sp. *syen* is Chinese, *chuen ship* K-h., *shun ship*, *boat*, K-t.

The southern terms have been given in Chap. V. Sec. 11.

1. The prevalent forms of 1 have the nasal final. The vowel augment of the Bhotian *koa* is found with this final in Taying Mishmi *re-wang* (*rua* Brown). The Lau *fam* has *rua*, *reu*. The Ka *duak* is the same form with the final gutturalised; and the Kambojan *tak*, *tu-tuit*, *tup*, and Chong *dok* are variations of it. Khyeng also preserves a *k* form, *ha-ruk*.

The Lungke, Khumi, Kyau, Kami, Mru laung, laung, Sak hau; have a different form of the double vowel. The Anam tau *ship* is probably referable to it, the Kambojan group having also the dental for the liquid. It is possible that these au forms have a distinct origin from the na ones. They resemble the Irano-Dravidian and Asonesian nau, plava, falau &c.

A slender form of the root is found in Singpho, Jili, Karen, Kapwi, Maring, li, Rakhoing, Maram, C. Tangkhul lhi, Burman lhe, Mon leng, Kasia ling, Garo ring.

The *k, t* prefix of Bhot., Borpa, Manyak and Takpa is found in Jili *ta-*, Karen, Mon, Khyeng *kh-*, *n-*, Mikir *t-*. In Aka it becomes *hu-*, in Nogaung Naga *au-*, in Khyeng *ha-*; Lhopa and Changlo have *d-*; the labial of Thochu and Gyar. occurs in Kumi, Kyau, Koreng, Khoibu, N. Tangkhul, Champhung, and Toung-thu.

The sp. Bh. *koa* is found as a distinct root in the Naga group *khoa*, *khuon*, *khung*, *kho*, Manipuri gr. *khong*, *kho*, *kong*, and Limbu *khom-b-*. Anam has *ghe*. Abor *et-ku*.

4. The Chinese *san pan K-t.*, *san pan K-h.*, is found in Siamese for *ship kam-pan*, *san-phao*, *ta phao*, Anam *sloop tam ban*, Burman *song pua*.

3. The Chinese *chuen* is found in Anam *thuyen boat*. Brown gives *ding* which must be the Chinese *ting*. Mulung has *ye-sang* and *Ta-blung ih-sang*, which are referable to the Chinese *san*.

Qns. 1. The slender forms of *ru*, *ra* are only found in the Irawady branch. The *u* form was evidently the original in the South, and was communicated to the Gangetic dialects, the same form being found in the Nipal, the Hindi and the north Dravidian dialects.

2. The Taying Mishmi *rowang* {=*ruang*} and *Ka duak*, appear to preserve an archaic form now lost in Tibet. Its presence in the Kambojan group in one form and in the Lau in another, accords with the comparative antiquity of the Mon-Anam glossaries. The Gangetic forms *donga*, *dunga* &c. are referable to this variety. The Dravidian and Arian glossaries have distinct terms, but none of these are found in the Mon-Anam.

5. Arrow.

1. The Bh. *dah*, and Thochu *ja* suggest that the archaic form was *dak*.

The southern forms are similar to the softened Takpa *m-la*, (Manyak *m-a*). Comp. Jili *ma-la*, Singpho *pa-la*, Toung-thu and Karen *p-la*, *pa-la*, Burm. *m-ra*, *m-ya* (found also in Gurung, Murmi and Magar, and further contracted in the *m-e* of Kiranti, *ph-ee* of Garo unless these be *me*, *phée*).

Mijhu Mishmi has the variation *lo* (*lo wat*), and a similar form *lu* is found in Angami the *lu*, Songpu *lu*, Champh. *ma-lu* and applied to the *baw* in Tengsa *lu*. The Siamese *luk* (*luk son*,—*son*, *ka-sun* is *bow*) has this vowel with the guttural final which archaic Tibetan appears to have had. Kambojan has *pi-ruen*, Mon *leou*, *lay*, *lau*.

The other forms of the Lau family have the *m* final, *lem* Laos, *Ahom*, *lim* Khamti. The Kasia *k-nam* is related to these. A slender form is also current in Karen *hh-li*, Lungke, Kami *li*, Doing-mak and Mrung *le*. Sak has the double term *to-li*—*ma-la*, the second belonging to the Jili-Burman-Takpa-Bhotian variety, and the former to the older Karen-Yuma, Kumi has *li-ta-i*.

The Thochu *ja* is found in the Khari *le-jak baw*.

2. The labial root—found in Gyarung only in the slender and contracted form *hi-pi*—is the prevalent one on the north bank of the upper Brahmaputra, and in older forms, probably Dravirian (*a-bu*, *an-bu* &c.), *m-po* Taying Mishmi, *e-pug*, *e-puk* Abor-Miri. The Garo phce and Kiranti me may be this root in slender forms similar to the Gyarung and to the Kondh *pin-ju*. It is found in the Khamti *lem-pun*, M. Angami *thi-wu*.

3. A very common southern root applied to the *bow* in some dialects and to the *arrow* in others appears to be of Chinese origin. Chinese has for *arrow* *tsien K-h.*, *tsin*, *chi K-h.*, *ten*, *chen*, *dian* &c. in other dialects. Kambojan has *ting*, (*bow*) Anam *ten*. A broad form is more common Ka tong, Siamese *son*, *ka-sun*, Limbu *tong*, Lepcha *chong*; Kapwi *than*, Namsang *la-chan*, Muthun, Joboka *san*, Mulung, Tablung *la-han*, Tengsa *la-san*, Nogaung *la-sang*. Angami has *po-si bow* (M. A. *po-rhu*); Mro *sa*, Kumi *ta-i*, tsa-koi, Khyeng *thwa*, Deoria Ch. *a-ta*, Mikir *tha-l*.

4. A guttural root occurs for *arrow* in Khari *ta-khaba*, and for *bow* in Namsang *doa-khap*, Muthun and Joboka *hap*.

Obs. 1. The older Irawady forms—Karen, Yuma &c., have the Gyarung *h* pref.; the later Singpho, Burman &c. have the Takpa and Bhotian *m* pref. The Burman form has spread to the Nipal vocabularies.

2. The Mon-Anam forms are older than any of the Tibetan.

3. The Abor preserves an archaic and probably Dravirian form of the Gyarung root.

4. The slender form of *la*, *lu* is characteristic of the Karen-Yuma group.

5. The broad form of the sibilant root connects the Lau group with the Naga. This form has spread to Limbu and Lepcha which have the Siamese vowel and not the Naga. Possibly the a form of the root is Arian and not Chinese.

6. The same word is applied to *arrow* in one dialect and to *bow* in another. In some dialects both have the same name as in Nogaung *la-sang* (properly *bow's arrow*).

7. The name is frequently compound.

6. Iron.

1. The Bh. wr. *chags* is a broad full form of the sp. *chhya*, Manyak *shü*. The Horpa *chu*, Gyarung *shon* (prob. *sho-m*) have a distinct vowel. The Thochu *sor-mo* appears to be connected with these forms.

Chinese has the sibilant root *tü K-t.*, *ti K-h.* (comp. also *sik tin K-t.*, *se K-h.*). But the archaic broad Tibetan form is more immediately related to Seythie forms, *thu-mar*, *tu-mur*, also the *mar* Mong., *tup*, *tip* Yenisei, *soi*, *suy* Koren. The *s-r-s-l* form of Thochu is probably connected with the similar Seythie forms applied to *iron*, *sello*, *sello*, *zhilla* Tungus, but more commonly to *gold* *sor*, *shor*, *son*, *sir* &c. The older application of the sibilant root was to *silver*, *salt* &c., the root itself being that for *white*. Iron was afterwards distinguished as *black-silver* and silver itself as *white-silver*, and this led to the form for *silver* acquiring a generic meaning (*metal*). See chap. v. sec. 11. Chinese *hak kam K-t.*, *he kin K-h.* for *iron* i. e. *black metal*; and *pak kam K-t.*, *pe kin K-h.* for *silver* i. e. *white metal*. Gold is *kam*, *kin*, with or without the qualitative for *yellow*.

Some other examples in addition to those given in chap. v. may be

taken from the adjacent Scythic family. The Yakuzki Tungusian *holarin gold* is a variation of the word for *red chola-rin*; the Lamuti dialect has *ulatyn-shyngun red-silver* (*ulatyn red*), and the common Scythic *altyn, altan, altun*, appears to be a variation of the form for *red*, the full root being *kula, chola, [ula-tyu=kula-rin]*, in Ugrian *gor-d, gor-de, kel-ban* &c. Some Turkish dialects have *kysyl-kumyos red-silver*, or simply *kysyl*; Yakuti prefixes the word *white* to *silver* *uryon-kumus*. In some of the Lesgian dialects the same root *arats, araz* &c., is both *white* and *silver*; and it recurs with the former meaning in Nilotic dialects *arsa Woratta* &c.

2. *lekh*. This exceptional Takpa form is probably a variation of the Tibeto-Burman root for *black nak, lak, reg* &c. &c. (See p. 25 *et seq.*).

Southern terms.

1. The broad form is found in the Burm. *than, Mee Kumi ka-dang, Songpu n-tan, Nams. jan, Muth. jian, Job., Mul., Tab. yan, Angami the-ju* (M. A. je), *tha Karen, tai Young-thu*.

The archaic Bhotian guttural is preserved in the Kholbu *sak-ma, Koreng chag-hi, Anam sat* (comp. Chinese *sik tin, tit iron*), *Tiberkhad ebaka*.

Slender forms are common. *teng-gri Mijhu M., tsi, si Taying M., thin Kapwi, tin Luhappa, thir Maring, thiar S. Tangkhul, hi-ying Kyau, yin Tenga, Nogaung, a-yin Khari, je Moz. Ang., tir Kyau Lungkhe, thi Khyeng, ing-chin Mikir, shein Kani, thein Sak, say-thi Young-thu; Dhimai chir, Lepcha pan-jing.*

The *u, o* form of Horpa, Thochu and Gyarung is found in *Garo shur* (Thochu *sor-wo*), *Bodo chur, Mrung teho, Angami the-ju, Deoria Chutia sung, Mon pa-soe ha-sway, po-thway.*

2. The Takpa *lekh* is found in the *lek, lik* of the *Lau fam., dek, dik Kambojan*. Some Irawady terms which I formerly considered to be Dravirian, appear to be variations of this root.

wa-ru N. Tangkhul, ma-ri S. T., mp-ri Singpho, a-ruk Champhung, rung, run, p-ron Milchanang. Rok, luk, lok are current forms of the Tibeto-Burman root for *black*. The same root probably occurs with the guttural pref. in the *Abor yo-gir, yo-grid, ya-gurah, Mijhu teng-gri, Sunwar wa a-kli, (Singpho brass ma-gri).* The analysis is probably *g-ri, h-li, gu-rah* &c.

3. *ka-pha Maram, ta-phi Jili, c-mau, ta-mo, ta-mhu Khumi; Lepcha pan-jing, Limbu phen-je, Kiranti, Magar pha-lan, Murmi pha-i, Gurung pa-i, Sunwar wa ekli, Ka mam. Kiranti, Magar pha-lam.* The labial is Dravirian, *panna Uraon, karu-mban, ka-bina* &c. *S. Drav.*

4. *nar Kasia, na Newar.*

ONS. 1. The broad and full Sifun form *sor, sho (r), chu (r)*, is found in *Bodo and Garo*; the more prevalent slender forms in *r*—also referable to it—are chiefly found in the *Manipuri and Yuma group*. The *a* form distinguishes the *Burman, Karen* and several *Naga dialects*; it may be *Bhotian, chang, than* for *chag*.

2. The liquid name appears from its variations to be archaic. The slender full form connects *Takpa and Lau*, while the contracted form, with the gutt. pref., is common to *Singpho, Mijhu, Abor and Sunwar*, and, with the labial pref. is com. to *Singpho and S. Tangkul*. Broad forms like the *Champhung a-ruk, and Mileh. run, p-ron*—found so far apart—suggest that this word, derived from the native root for *black*, was the earlier diffusive Tibeto-Burman name. It may have been that of the first *Hi-*

malaic vocabularies that were carried south (Mon-Anam or Lau).

The names for the other metals are not given in the short vocabularies, and any comparison of those known would be very imperfect. But I give these for *silver* and *gold*, as some repeat the roots that are used for *iron*.

7. *Silver*.

1. The Bhotian word for *silver* is Chinese, K-t. ngan, K-h. yin, Bh. ngui. The Lau fam. has ngun, ngon, Namsang, Joboka ngun, Muthun ngwun, Toung-thu yun, Malung nin-mang, Tablung tai-nan, Anam ngan. The Lau word and the derivative Naga have the archaic u preserved by Bhotian. The root is probably *white* 2.

2. Khari has a-tsun, Mikir tangka, Changlo tang-ka, Mon thaun. This is one of the roots for *white*. A different form preserved in the Siamese sit *white* is applied to *tia* in Chinese, sik K-t., se K-h.; Anam thick (K-t.); Siam di-buk (buk *white*).

3. Angami has roko, aka. This is the liquid root for *white* lak, long &c. The Kambojan p-rak has the same root, but it is probably from the Malay perak, in Champa peak. The Angami raka throws doubt on the Semitic origin of the Indonesian perak, pirak; and the silaka of Javan &c. more than strengthens it. The root of both words appears to be the Angami raka,—p-rak, si-laka. The prevalence of this root in Indonesia and its rarity in Ultratania may be attributable to the native Tibeto-Burman term having been generally replaced by the Chinese. Khari preserves a native name, a-tsun, which is also a root for *white*; Tengsa and Nogaung have adopted an Aryan word, rap, lup; while all the other Naga dialects have received the Chinese name.

4. Singpho kum ph-rong (*metal white*).

5. Anam bac (*white*, buch). 6. Abor a-mel, Naga mang, Murmi mui, Milch. mil, mul, Drav. viñ &c. (See Iron 3, and chap. 5. sec. 11.).

8. *Gold*.

1. For *Gold* Bhotian has ser, si, Changlo, Mikir ser, Kasia k-ser, Hindi sar, Pashtu sor, Muthun sien, Joboka sian, Silong sin, Karnataka chin-na, Rakhoing shwi, Burm. sui, karen tu, Mon to, tha, thau.

Both the Tibeto-Burman slender ser, and the Pashtu sar, are Scythic, ser-ne, sir-ne Wolg., sar-ñ, sor-na Ost. &c. The Aryan hir-na, hira-nia are evidently from sir-na,—sona from sor-na; suvar-na is an amplified form.

The Siamese thong appears to be from the Pali sona, like the Milch. zung.

2. Mikir dor-bi (rok-dor *iron* Dophla). This is probably an archaic form of the Scythic sor, derived from a Sifan dialect. The Sifan names are not known.

3. Abor a-ngin, a-ina, Doph. a-en, Angami li, Khari ta-ru (*Iron* 2).

4. Singpho ja (*Iron* 1).

5. The Chinese kam K-t., kin K-h. is found in the Lau fam. kham, thong kham, Namsang kam, Mulung, Tablung kham, Anam kin, Toung: thu khan-ni.

6. Anam has vang, Laos wang (*yellow* Ch.); Ch. hwang kin K-h., wong kam K-t. *yellow-metal*.

7. The Kambojan mias is Malay, mas.

Obs. The southern names for the metals are mostly Tibetan. A few

Dravidian terms are preserved in the North Gangetic dialects. The Mon-Anam vocabularies contain archaic and modern Tibetan, and archaic and modern Chinese, names. The Chinese names appear to have displaced the native ones in several dialects.

9. Salt.

All the Tibetan dialects have the same word,—Horpa, Bhotian and Takpa having a broad, and the Sifan dialects a slender, vowel. The abrupt accent of Horpa, Thochu, Gyarung and Manyak indicates an archaic guttural final.

The root is not Chinese, but Scythic. It is common to all the Scythic families, and in most of them it occurs both with the liquid and dento-guttural finals, and also without them. Korea *sok-am*, *suk-am* &c.; Yeniseian *chhyg*, Samoiède *shak*, *sak*; ser, *sir*, *si*. Ugrian *sich*, *sak*; chal *sal*, *sol*, *sal-na*; sot, *sow*, *so* &c.

The root appears to be the same that is used for *white*, and applied to various white or bright objects, *moon*, *silver* &c. &c. (ante p. 29). Thus Samoiède has *sir*, *ser*, *kyr* &c. *white*, *sir salt*, *seram-bire silver*; Ugrian has *ser-ny*, *ser-ni*, *sar-im white*, *sol-ni* &c. *salt*, *sar-ya silver*. The Yeniseian *chhyg salt* occurs for *white* in *tyg-bis Yen.*, *tyag*, *chaga* &c. Samoiède. The Armenian *ag salt* appears to be the Ugrian and Turkish *ak*, *agh*, *white*. The root is one of the archaic and widely diffused ones of the proto-Scythic vocabulary. Caucasian preserves a primary form *shug*, *chush*. It has also of *rim* in *m*, *n*, and vocalised,—*zam*, *zyam*, *zon*, *zun*, *chia*, *zio*, *ze*, *p-su* *Lesg*. Mingrelian has *zhumi* and Lazian *chumo*. In Cherkesian the same root is *white* and *salt*,—*chush*, *kush white*, *chush salt*.

The sibilic-liquid form is found in the Indo-European family,—*sol*, *sul*, *sal*, *salz*, *zout* &c.,—and in a few African languages,—*sira*, *sima* Malagasy, *singa* Shangala, *gi-sili* Hausa, *gi-sie* Karekare, *di-ga-sin*, *ge-seli* Bode gr., *go-da-sin* Baghermi, *i-si* Mandara, *dsi-sem* Kandin, [*salo* Kabonda, *ndzolu* Miniboma, prob. Europ.]. An *m* form occurs in Gonga *shum-bo*. An older Scythic form occurs in Penin *sek*, Ham *tek*, Goali *sag-lele*; and a sibilic root without a final consonant is *cam*, *cha-wish*, *chaw* *Chitic*; *chua*, *cha-wi*, *le-due*, *mlé-i*, *mo-ro*, *pa-za*, *n-ta*, *n-to*, *wa-si*, *a-wa-ds*, *a-dsi*, *i-sa*, *i-zo*, *c-sa*, *ya-se*, *y-sa*, *mi-si-s*. The Semitic root is different,—*melach*, *milch*, *m-lh*, *malak*, and it is found sporadically in Africa, with Egyptian, *miluk* Bishari, *mer* Landama, *Baga*. The more common African roots are the liquid, *a-man*, *o-nuk*, *i-non*, *ba-no*, *a-no*, *e-ro*, *bu-ro*, *ju-ro-mi*, *pa-vam*, *lam-dam* &c. and the guttural *koro*, *kiri*, *kon*, *a-koli*, *a-kan*, *mo-uggua*, *ngkua*.

From the Georgian *mitli*, and the general glossarial connection between the Semito-African and the Caucasian vocabularies, it is probable that the *mel*, *mil* of the Semitic word is a distinct root, and that the Chaldee *mil-chu*, Syriac *mel-chu*, Assyrian *mil-cha*, preserve the compound best. If so, the second element would appear to be the Scythic, Tibetan, Caucasian and African root, and the first the Semito-African, Dravidian and Scythic root for *white* that is so prolific in names of white and bright objects (chap. v. sec. 11, Iron, Silver). The form of the second element *chu*, *cha*, *chuo*, is that which the sibilic root retains in Tigre, Agau and Gonga, *cha-wi*, *chu-a*, *shum-bo* (or *shu-mbo*).

In the south the Tibetan root is very common. Most of the forms appear to be more archaic than any of the current Tibetan, and to be referable to an *-m* and not to a *-k* variety. Possibly the Chinese *yau*, *im*,

yen—which would otherwise be neither Scythic nor Tibetan—is a soft form of an archaic Chino-Himalaic form, *sum*, *sun*, as the *yum* is of *sum*. The *-m* form is rare in Scythic, and the Caucasian *zam*, *zai* &c. favours the archaic existence of a similar Chino-Himalaic form. The Mijhu *te*, *m-yin* is probably a modern Chinese form.

Siagpha *sum*, *tsum*, *jum*, *Jili chum*, Manipuri *thum*, Namsang *sum*, Muchun, Joboka, Mufung, Tabledung *hum*, N. Tangkhul *n-ta*, Nagaung *ma-tau*, Bodo shyung *kare*, sayung *kri*, Deoria Chutia *sun*, Sak *sung*, Limbu, Kiranti *yum*, Lepcha *yom*, Sunwar *yu si*.

Maram *n-ehi*, Songpa *n-tai*, Koreng *ma-tai*, Arung *ia-ehai*, M. Ang. *ma-tse*, Ang. *ma-tsa* (by invers.), Kapwi, Luhuppa, C. Tangkhul, S. T., Tengsa, Khari *ma-ehi*, Kuki *ehi*, Khoibu *mi-ti*, Maring *ti*, Mikir *ing-ti*, Pwo Karen *thi*, Lungkhe *she-te*, (nghet-*te ant*, wat-*ti egg* &c.), Kyau, Khyeng *ma-tsi*, Dhimai *de-se*, Sunwar *yu-si*, Newar *chhi*, Savara *ba-si*, Gadaba *bi-ti* (= *mi-ti* Khoibu).

Champhung *ka-sam*, Changlo *in-eha*, Burm. *ehha*, *sha*, Toung-thu *ta*, *ta-thah*, S. Karen *i-tha*, Mra *wi sha*, Magar *cha*, Gurung, Murni *cha-cha*, Tiberkhad, Mieh *tsa*, Garo *syang*, *kara sam*, (the guttural is the Mindi *khar*, Bengali *khyar potash*).

2. Siam *k-leua*, *k-lua*, Ahom *k-lu*, Laos *k-en*, *k-em*, Khamti *k-u*; Kasai *m-luh*, Kumi *ma-lwe*, *pa-lu*, Kami *ma-loi*, Aber *a-lu*, *a-lo*, *a-la*, Dapla *a-lo*, T. Mishmi *p-lu*, Pwo Karen *la*, Anam *loi*. This root is Chinese, *lu*. It appears to be the com. Tibeto-Burman liquid root for *white*, which occurs with similar forms (p. 28, 29).

The Bengali *nan*, Hindi *lon*, Sindhi, Assam *lan*, Singhalese *lum*, Kol, *bu-lu-ug*, *bu-lung*, have the same root in the Mijhu, Garo, and Yuma forms for *white*, *lung*, *laug*, *nung* &c. The African liquid names may have an Indian origin.

3. Anam *muoi*, Mon *bho*, Kambojan *am-bil* (? vom Lepcha). These words have no affinity with the Tibetan or Chinese roots, and they must be referred to the Dravirian element of Mon-Anam. The S. Drav. dialects have *uppu*, *uppa*, *upp*. Kol *bu* in *bu-lung*, Male *bu-ke*, Uraon *bu-eh*. All these Dravirio-Anam words are connected with the Thochu, Mon-Anam and Dravirian labial root for *white*. The Kambojan *am-bil* has the Drav. form found in *white*, *silver*, *moon*, *star* &c. The others resemble the Kol. *pan-di*, *pan-ia*, Tuluva *bid-ane* (the other S. Drav. dialects have the slender form *vel*, *bil*), Suga *a-po*, Sunwar *bwi* &c. *white*, and some of the Gangetic forms for *silver*, *mul* *Mileh*, *moi* *Murni* &c. The root is Scythic, *white* *hai-mat* Yukakiri, *wo-kan* Urtian; *silver* *hopen* &c. Fin, *um* Korea. From the forms of the Dravirian and Mon-Anam root in its different applications, it is probable that it belongs to the Scythic basis of the archaic Dravirian glossary. The *-k* forms for *white* in *Lau* &c. are Chino-Thoetan, (Thochu). The use of the labio-liquid root for *salt* is common to Georgian, Semitic and Dravirian.

The Goid *sa-bar* (*sa-* is pref. in some other words) appears to preserve an archaic full form of the labial root like Kambojan (*bal*, *vid* is the Kurgi and Tuluva form, *mat* in *mat-sal light* Kol.). The Pasutu *malga* may be the same root, *mal-ga*.

The Sanskrit *la-van* may have the same liquid root. The postfix occurs in Scythic and African *war* is also used may be the Scytho-Drav. root for *white*. Australian has *wil-ban white* (*wil* Drav.).

SEC. 7.

THE FORMS AND DISTRIBUTION OF THE CHINO-HIMALAIC NUMERALS IN CHINA, TIBET, INDIA AND ULTRAINDIA, CONSIDERED AS ILLUSTRATIVE OF THE ANCIENT RELATIONS AND MOVEMENTS OF THE TRIBES OF THIS PROVINCE, AND OF THE SECULAR CHANGES IN THEIR GLOSSARIES.

Any further remarks on the distribution of the numerals must be chiefly supplementary to those which have already been offered. But some general points of interest are brought out by a closer comparison of the southern forms with each other and with the Tibetan and Chinese.

It is clear that each of the primary numeral elements—definitives—has assumed a great diversity of forms in different eras, or in different dialects. The most prevalent Chinese and Tibetan forms are not those which appear to have been so at the epochs of the first diffusion of the Chinese numerals in Tibet and of the Tibetan in Ultratania. But as the vowel probably varied from a very remote period, the subject does not admit of our attaining positive results beyond a certain extent.

Upon the whole evidence, direct and collateral, it may be concluded that broad forms of the guttural or dental definitive were used as the earliest unit, and in higher numbers formed from the unit; and that the Chinese series was—

(I.)	.....	1.
(II.)	.....	2.
(III.)	2 + 1,.....	contracting to 1.
(IV.)	2 + 2,.....	” ” 2.
(V.)	3 + 2, i. e. 2 + 1 and 2	” ” 2.
(VI.)	5 + 1,.....	” ” 1.
(VII.)	6 + 1,.....	” ” 1.
(VIII.)	10-2 (10 being 1) ..	” ” 1 or 2, or 2, 1.
(IX.)	10-1	” ” 1.
(X.)	.....	1.

In sec. 4, I considered it probable, from analogy, that 5 was 1, although differing in form from all the definitives used in the lower numbers, save one of the varieties of 2. That it is really 2 will appear on a comparison of all the forms. The root for 6 appeared exceptional, and it was considered as being an archaic N. E. Asian ternary term, 3, for 3, 3. As 3 is 1, the root, whether considered as 5 + 1 or 3 + 3, would be the same in form, so long as the two definitives used as 1 and 2 formed higher numbers by simple repetition without agglutination or contraction. I now think that luk 6 can be explained as a normal Chino-Tibetan form of 1. The Chinese 7 was shown to be 1 (for 6 + 1); but the Tibetan, with the exception of Thochu and Manyak, to be quinary. The Chinese 8 was shown to be 10 (for 2, 10); but the Tibetan 8 was considered to be 4. 2, for 4 the 2d. In several of the Southern dialects the name for 8 is a root for 10, that for 2 being lost. Singpho *ma-sat*, Bodo *jat*, Arung *ti-sat*, Namsang *i-sat*, Tablung *thath*, Khyeng *sat*, Toung-thu

chat, Khari *sa*-chet, Muthun *a*-chet, Gara chat, Burman shyit, Nogaung te, Deoria *du*ga-che, Chong *ka*-ti, Angami *the*-ta, Newar chya, Tengsa *the*-sep. This is the Chino-Tibetan 10 (itself a form of 1). In sec. 4 the identity of the r, l, element of 8 with 4 was pointed out, and the inference drawn that 8 was 4, 2, i. e. 2d 4, the second element resembling some forms of 2. But these common southern forms of 8 appear to be reconcilable with the northern. In the remarks on the Chinese and Tibetan 2 and 4 the radical identity of both was shown, and it was pointed out that the Tibetan liquid form of 4 preserved a variety now obsolete in the Chinese 4, although preserved in 2, "one of many illustrations of the great antiquity of the first diffusion of the Chino-Tibetan numerals." The probably denary origin of the Chinese 8 and 9 was also noted. In my first comparison of the Chino-Tibetan numerals (App. C.), I remarked the accordance of some forms of the liquid element in 8 with liquid forms of 2. If we consider this element as in all cases representing 2, the southern numerals of the Tibeto-Burman family are reconciled with the northern, and both with the Chinese; and this view I now consider the right one. According to it, the Tibetan 8 and 4 retain forms of the Chinese 2 distinct from the current nasal ones. The common southern 4, *me*-li, *pi*-li, *ba*-li, *b*-ri *p*-re &c. is an ancient Tibetan form of 2 and 4, corresponding with the Chinese li, liang 2. A Tibeto-Burman full form with the labial prefix, as in 4 and 8, is also preserved in one of the most archaic of the southern dialects, Mru, which has *p*-re 2, (comp. Bado *b*-re 4, &c. &c.). This appears to have been replaced in 2 of the other southern dialects by the later prevalent Tibetan 2. The second element in the Tibetan 8, *gyud*, *gyet*, *yat*, *gye*, *ö*, must be a form of the unit representing 10. The Mru *ri*-yat 8 has the two pure roots 2, 10, as in Horpa and Gyarung. *

From the preceding Table it appears that the definitive used as the unit is found in 1, 3, 6, 7, 10, and, in some dialects, in 8; and that the definitive used as 2 is found in 2, 4, 5, and, in some dialects, in 8. These two definitives may be termed the unit and the dual.

The unit being in its origin a demonstrative or definitive used qualitatively or discriminatively, its vocabulary was probably coextensive with that of the definitive in the older classes of language. In the Chino-Himalaic definitive system the normal unit def. was the guttural, varying to dental, sibilant and aspirate forms, as the same def. and unit does in all other formations in which it occurs, Scythic, Semito-African &c. It also varied to the liquid as in other formations, but this form was comparatively rare. In Tibetan this def. is now applied to inanimate substances, the labial being the primary animate def.

The Chino-Himalaic unit, in its earliest cognizable stage, had two forms, one having the labial final, and the other the guttural passing into the dental, the vowel being broad in both, u, au, a &c. Extant examples, *gyud*, *kyok*, *kyot*, *kat*, (*kung*, *kang* &c.); *sut*, *bat*, *chat*, *jat* &c.; *zup*, *sun*, *tham*, *sap*, *chup*, (*lum*, *sun*, *tun*, *song*, *san* &c.); *luk*, *rak*, *lat* (*ram mod.*, *rang*, *nung* &c.). Of these forms those with the guttural ini-

* As the Chinese *y* of *yat*, *yit* appears to have been formed, not by a conversion of *ek* into *y*, but by a hardening of the vowel, from an amplified vocalic form similar to 9, it is probable that in *gyud*, *y* is the radical initial, and *yu* merely the amplified vowel. Comp. the Lepcha *kyot* in 9, *kyok* in 8.

fial are probably the oldest. Forms in t, d, ch, z, s, l, r appear to have been formed from it at an ancient period, and before the system spread into Tibet. When it was first carried into the Himalaic province broad forms only prevailed, and these are still the most common in it.

In the next or 2d stage—that preserved in the southern Chinese dialects,—slender vowels were developed, but the final consonants were retained. The Bhotian *l* *chig*, *chik*, is referable to this condition of Chinese.

In the 3d or latest stage, or that of the modern Kwan-hwa, the vocalic and elliptic tendency set in strongly. In the Kwan-hwa phonology all the consonantal finals, save *n* and *ng*, have disappeared. The only numeral forms referable to this stage that are found in Tibet, are some of 1 and 10 (*sih*, *chi*, *che*, *chi*, *ti*). Its influence is chiefly marked in the contractions of the native vocables. Many of the broad archaic forms are still preserved, although vocalised by the loss of the final consonant. In others the vowel has become slender. If the formation of the Kwan-hwa phonology only began in the Tsang dynasty (A. D. 620 to 907)—as Mr. Edgkin believes—and the loss of the final consonants took place afterwards, its influence on the Himalaic province must be very modern. Probably it dates from the conquest of eastern Tibet by the Chinese in the 12th century.

The 3d stage being brought down to a period so recent, the 2d will not require to be placed at a very great distance behind it.

A second Chinese def. used as the unit was the labial. It appears to have been disused at a very remote period, and before the Chinese system was carried to Tibet, as it is only extant in the Chinese 8 *pat* &c. (for the unit of 10), and 100 *pak* &c. This is an archaic form of the masc. labial qualitative and definitive of the Himalaic system.

The normal dual def. was the liquid in *n*, *ng*, *l*, *r*, variable to the sibilant.

FORMS OF THE UNIT DEFINITIVE.

Broad Forms.

1st, *u*, *o* forms.

I and X. The archaic broad forms have, in most of the Chinese and Tibetan dialects, been changed into slender ones. Some of the Chinese forms retain final *k*, *t*, (in 10 *p*.) The oldest forms appear to have been *kuk*, *kut*, *tak*, *chuk* &c., *kak*, *tak*, *chak* &c., and these are current in N. E. Asian systems. Bhotian in 10 preserves a similar form *b-chu*, *Serpa*, *Gurung chuh*. The great antiquity of this form is corroborated by its retention of the archaic labial def. as in the Dravirian *pa-du*, *bu-d* &c. 10, Seythie *be-t* 10, *hai-ke*, *fi-to* &c. 1. A similar broad form is found in the 1 of Sgau Karen *tu*, Pwo Karen *ka du*, Tengsa *kha-tu*, whence the contracted Kuki, Magar and Lepcha *ka-t*. Thochu retains this form in 10 *ka-du*, a Tibetan form of the root equally archaic with the Bhotian *b-chu*. The archaic irawadi forms clearly associate themselves by their prefix with Thochu, which probably preserves an older form of the Gyarung *ka-ti*,—*u* in the slender phonology becoming *i*. The Lau *nung*, (*ling* in Ahom), is referable to the Tibetan *d*, *r*, *l* forms.

III. The same archaic form of the unit is found in the 3 of Bhotian *q-sum* and Horpa *su*. It is the most prevalent form in the south and

probably the oldest, being that of the Yuma gr., Karen, Toung-thu, Burman, Singpho, Diimal, Nipal &c.—sun, tun, tun, sung, thun, thu, song, su, um, om.

VI. The Chinese luk appears to be a liquid variety of the full archaic u form. The u, o vowel is retained in all the Himalaic forms. In the Tibeto-Urminian dialects the prefix is the guttural, dental or sibilant. The root varies to ru, ro, rau.

The dental and palatal varieties are found in the Bhotian duk, tuk, thu, Gyar. tek, Horpa chlu. The last is probably a primary form of l similar to the Bhotian chu of 10. The others may also be more full primitive forms, but the immediate source may be the Bhotian druk, and druk may be the Chinese luk with a Bhotian prefix *d-ruk*. Possibly *dr* is an archaic intermediate form between the dental and the liquid.

VII. Manyak *s-kwi*, a form of the unit preserved in 9. Lepcha kyok (=kyot of 9), a remarkable archaic form.

The Bhotian and Horpa *den*, Serpa *dyen*, Changlo *zum*, I now consider native, for the reasons given elsewhere. Changlo has the archaic form of l preserved in 5. Mijhu has *nan*, a form corresponding with the Lau *nung* l.

VIII. Bhotian *gyud*, Sunwar *yoh* (? Mijhu *ngun*).

IX. Both Chinese and Tibetan retain archaic forms, *kyen*, *kin*, *gu* &c. Bhotian, Takpa and Horpa preserve the inanimate prefix, *d-gu*, *du-gu*, *r-gu*. In the south it is found in Garo *sh-ku*, Bodo *s-ku*, *ch-ku*, Singpho *tsi-ku*, Shinda *cha-ku*, Nogaung *ta-ku*, Tengsa *tha-ku*, Khari *te-ku*, Kani *ta-ko*, Kani *ta-kau*, Mieh. *s-goi*, Karen *khwi*. The Lepcha *ka* kyot is an archaic Chinese form similar to the Bhot. *gyud* of 8. The Gya mi *chya* is an instance of the change of the archaic guttural into *ch*, which has taken place in the Chinese 1 and 10.

X. Bhot. *b-cha*; Thochu *ha-du*, Kani *ha-su*, Sak si *so*. The Kuki *sum-ha* preserves the full archaic form. Tengsa has the liquid variation *the-lu* [=the-log, *ta-ru* &c. in 6].

C. *cham-wan* Kani, *ro-h-ru* Nogaung (10 × 10), *ta-loyen* Toung-thu.

2d, a forms.

The *a* form is also preserved in several dialects, and is probably coeval with the *u* form.

I. *ra* Horpa, a Thochu, *ta* Manyak. This was evidently a common Tibetan form at one period. In the south it is Yuma, Burman, Karen and Toung-thu. From the distribution of the *a* forms they appear to be of the same age with the *u* forms. Comp. Tengsa *kha-tu*, Nog. *ka-tang*, Sgan *tu* or *ta* &c. The Burman wr. *tach* [=tang Nog.] preserves the archaic guttural final.

III. The Chinese form is *sau*, varied to *sang*, *san*, *sa*, *ta*. In Tibet it is only found in Gyarung, *ka-sau*, whence it has been transferred to the south, being the form of Mijhu, Mikir, Garo, Bodo, the Naga groups (save Angami), Dophla, Changlo, Lepcha, Sunwar. It probably belongs to the latest Gyarung current. In some of the Naga dialects the sibilant is hardened into *z*, *r*, *l*—*zam* Muthun, *ram* Namsang, *lan* Taiblung. Kani has *hai*.

VI. The *a* form is very rare. Thochu has *kha-ta-re* and Mijhu *ka-tham*, the Gyarung 3 form.

VII. Chinese in Kwang-tung has *tsat*, Thochu *s-ta*.

VIII. The same broad form is found in several of the southern systems, representing 10. It appears to have been the old Irawadi form—*Toung-thu*, *Khyeng*, *Naga*, *Singpho*, *Bodo*, *Newar*—*tsat*, *that*, *sat*, *ta* &c. The *Takpa ya*, *Mru yat*, *Kami* and *Kumi ya*, are from an a variety of the archaic form preserved in the *Bhotian gyud*.

IX. The *a* forms appear to be referable to the archaic amplifications of *u*. Thus the *Dophla kayo* appears to be a broader variety of the ancient form preserved in the *Lepcha kyot*. The *Kwang-tung kau* is a similar Chinese form, perhaps more archaic than *kiu*, *kyeu* &c. The *Lau* and *Kumi kau* are referable to it.

The *rang* of the double Abor term *ko-nang-ko*, *ko-nang-e*, is an archaic 10 found in the *Dophla rang* 10, and corresponding with the 1 of *Horpa ra*, and *Lau nang*, *ling* &c. The *Taying ko-nyong* 9 has the broad *Lau* vowel.

Dhimal has a similar double form *ko-ha-long*, and *Taying* has *ha-long*.

X. Chinese *chap*. The *Horpa s-ga*, *s-ka*, *Garo s-kang*, is a vocalised variety of a still more archaic form. The *Lhopa cha* of *cha-tham* has the Chinese form. *Newar san-ho*, *Khyeng ha*, *Kami ha* of *ha suh*.

The *Bhotian tham-ha* appears to be an archaic form corresponding with the Chinese *chap*, *Kuki sum*.

Dophla rang, *Khari ta-rah*, *Shindu me-rha*. (See I).

Kumi has *hau*, an amplified form corresponding with *kau* 9.

C. *gya-tham-ha* *Bhot*, *gya Serpa*, *cha-the* (10 × 10) *Nams*, *ya-kha Shindu*, *ta-ya Sak*.

Sunwar s-wai ka (1 × 1 for 10 × 10, *ka* 1 *Sunwar*, *chi-wai* 10 *Murmi*).

chya Horpa, *lat-sa* (10 + 10) *Singpho*, *ra-sa Kuki*, *k-laht Khyeng*, *ta-ra Kami*, *Burman wr.* (*ta-ya sp.*).

Slender Forms.

I. Chinese *chit*, *chek*, *yit*, *it*, *ih*, *i'*, *i*. *Bhot. chig*, *Gyar. ti*. These slender forms have made little progress in the south, and must have been received subsequent to the migration of the broad forms preserved in *Manyak*, *Horpa* and *Thochu*.

III. The only slender forms are the *Thochu*, *Manyak* and *Sak*.

VI. There are no slender forms.

VII. The Chinese forms are generally slender. As an archaic broad form is found in 3, it may be enquired whether the Chinese 7 did not retain its full form 6, 1, until after the development of the slender form of 1.

VIII. *Garo chet*, *Muthun a-chet*, *Khari sa-chet*, *Burm. shyit*, *Nagaung te*, *Deoria daga-che*, *Chong ka-ti*, *Tengsa the-sep*. These are all referable to the modern 10.

IX. The modern Chinese *kiu*, *kyeu*, are not connected with the modern slender 1, 7 or 10, but with the archaic form of 1. They *Tibeto-Ultraiindian* forms are all broad.

X. The Chinese slender *shi*, *ship*, *sip*, &c. has been received into *Gyarung*, *Manyak* and *Takpa*. In the south it is found in conjunction with an older broad form, equivalent to *one ten* (20 being in many *two ten*, 30 *three ten* &c.). *Burman she*, *Toung-thu tah-si* (*ta* in 1), *Sak si su* (*su* 1), *Namsang i-chi*, (*Mikir i-chi* 1), *Singpho si*, *Bodo ji*, *Abor u-ying*, *Chang lo se* (also *song*), *Lepcha ka-ti* (1 *ka-t*, *Gyarung ka-ti*), *Kasia shi pon*, *Limba thi bong*, *Murmi chi wai*, *Lau fan. sip*, *Mikir kep*, *Kiranti kip*, *Chep. gyib*.

C. *Angami h-re*.

FORMS OF THE DUAL DEFINITIVE.

II. A. An archaic Chinese form is preserved in the Hek-kien *nō* and Tie-chiu *nō*.

B. The next form evolved appears to have been *liang*, *leung*, *ni*,—probably from an archaic form of *nō* [e. g. *ngok*, *nyok* or *niok*, *niak*, *niang*, *liang*]. *Ni* is the colloquial Shanghai form, and appears to have been also the Kwan-hwa.

C. The latest form has been evolved since Kwan-hwa converted *ni* into *rh*, in Gyami *ar*.

Some of the segregatives used to indicate pairs were probably ancient words for *two*. Kwang-tung has *tui* and *sheung*, Kwan-hwa *tu* and *shwang*; Shanghai has *song* “a pair of shoes.”

The *o* form is not found in the Himalaic province in 2, save in the Kumi *nhu*, Sibsagar *Mivi ngo-ye* and Singpho gutturalised *ukhong*. A cognate broad variety is preserved in Thochu *nga*, Manyak *na*, Takpa and Bado *nai*, and, less contracted, in the Burman *wr. nhach*, *nhak* (sp. *nhit*), Tengsa *a-nat*, Nogaung *a-na*. The Bhotian *nyis*, Gyarung *nes*, are slender varieties formed from a similar archaic Tibetan form [*nhak* or *nyak*, *ngak*, *ngik*, *nyik*, *ngit*, *ngis*; *nis*]. The Changlo *ngik* preserves an older stage.

The sp. Bhotian *nyi*, Horpa *nge*, are not derivatives from the Kwan-hwa glossary, but local variations produced under the influence of the later Chinese phonology. The contraction of the Sifan broad forms is to be explained in the same way.

In the south, the prevalent slender forms *nhit*, *nyet*, *ngi*, *ni*, *ne* &c. are not, in general, Tibetan importations, but local assimilations to the later Chino-Tibetan forms, induced by the modern phonology. (See p. 17).

The Mijhu and Garo *ning* is referable to *nik*. There is no example in the Himalaic province of the modern Kwan-hwa form.

While the Chinese dialects use both the nasal and liquid (e. g. *ni*, *liang*) forms as distinct words for 2, it is remarkable that only one of the known Himalaic vocabularies uses the liquid. It is found in one of the least modernised of the Yuma dialects, *Mru*, in the form *p-re*, the vowel being that of the nasal form in *Toung-thu*, *Angami*, *Khaci*, *Daimal*, *Lepcha*, *Limbu*, *Gyarung* and *Horpa*. This is an archaic Chinese vowel—*leung* Kwang-tung,—and as it is preserved in the 4 of Manyak, Bado, Burman, Angami, Tengsa and Sunwar and in the 8 of Kiranti, Mumi and Garung, it was probably at an early period current as 2 in Tibet. The *Kashu arisa* cognate broad variety, of which the full form is preserved in *p-rah* 8. In 4 and 8 *li* and not *ni* is the common form. It is clear therefore that *li*, *ri*, *re*, were used for 2 in the Tibetan system before it was carried south, and as the *n* form, now almost universal for 2, has archaic forms which could hardly have been derived from China subsequent to *li*, it is probable that in Tibet also both forms were current at one period. The labial prefix indicates the great antiquity of the *l*, *r*, form. It must have been disused in 2 before the original of the prevalent Southern systems was transported from Tibet.

The Lau *sang*, *song*, Changlo *ching* (*ngik ching*) appears, like *nung* 1,

to be an archaic Chinese numeral. It is similar to some of the current Chinese words for *pair*. *

IV. The oldest forms appear to be the Horpa *lia*, Kiranti *la*, Arung *dai*, Angami *da*, *deh*, which are probably examples of archaic Chinese forms early current with *nha*, or *nia*. The Chinese *liang* 2 is a similar form. Archaic forms are also preserved in those names for 5 which prepose the word for 4—*lia*, Takpa, *dia*, Dhimai, *rai* Bongju, *lei* Mijhu (*li* in Abor.). See p. 19. The Takpa and Dhimai *lia*, are evidently from *liang*.

The passage to the sibilant was probably through the sonant forms *j*, *z* &c. In Kwan-lwa the archaic sound *ni* becomes *r* and *j* (=zh). This change would convert the *nia* into *zha* (Thochu), and the current Chinese *sz*, *ss* are analogous forms, *si*, *ti* being probably later. The *l*, *r* forms are probably older than the sibilants. The interchange of *ni* and *li* is so easy and common that forms in *li* must have early been current in China along with *n* forms. The current *liang*, *leung* show that the *n* was commuted with *l* before the final consonant was lost.

The Tibetan and Southern *li*, *di*, *ri*, *le*, *deh* &c. are of a later type than *lia*, *ra*, but older than the sibilant. As the Horpa *lia* adheres to the normal form of the Thochu *zha*, so the earlier form of the Bhotian *zhyi*, *zhi* is preserved in the Takpa *li*, and the Gyarung *di* is referable to a similar form. It must have prevailed in Tibet when the numerals were carried south.

V. The older Chinese *ngo*, *go*, *ng* are broader than the old forms of 2 *no*, *nō*, and similar to some archaic Himalaic ones,—*ngo*, *nga*. In Tibet these archaic forms are also current as 5,—*ngo*, *nga*, *nha*.

In the South *nga* (Bhotian, Manyak, Thochu) is the most common form. The *o*, *u* vowel of Chinese and Gyarung is found in Khyeng *ngau*, Angami, Tengsa, Nogaung *ngu*, Abor, Dophla and Sunwar *ngo*, Lepcha *ngon*. The slender vowel of Horpa *gwe* and Takpa *lia-nye* is not found in the south.

VII. In Tibet the nasal form with the *e* vowel is found in the Horpa and Gyarung 7 as in 2. Both *e* and *i* are common in the South.

The older broad form is found in Toung-thu *nwot*, Kumi *sā-ra* (as in *pa-lu* 4), Limbu *na-sh*.

The *a* form occurs in Muthun *a-nath*, Abor *ho-nang-e*, Dophla *ka-nag*, Chepang *cha-na-zho*.

VIII. The Thochu *ra* of *kh-ra-re*, Gyarung *or* of *er-yet*, and Horpa *rhi* of *rhi-cē* are examples of the three forms which the root has acquired in the liquid variety. The Bhotian *br* of *br-gyud* appears to be merely a double prefix to *gyud* as in *br-gya* 100 where the guttural can only be the unit. (comp. *r-hya* 100 Horpa, *par-ye* 100 Gyarung). When this form of 8 was produced, the *l*, *r* form of 3 must have been current in Tibet, or at least in the dialect which originated such a form. The Manyak *zi* (in 40 *zyi*) appears to be a sibilant form of an older *ri* or *li* similar to the Horpa *rhi*. In the South the oldest group preserves some full forms Mru *ri yat*, Kuki *ri-et*, rik-t, Shindu *cha-re-a*. Similar forms without the 10 or its remnant occur in Kiranti *re-ya*, Murni, Gurung *p-re* (=p-re 2 of Mru).

* Possibly it is from *liang*. In the decaying Chinese phonology *ni* passes into *z* and *j*. Thus the Shanghai colloquial *nim mon* is read *zun*, and in Kwang-tung has become *jin*; *nich fash* is *zoh* and *juh*.

The only broad forms similar to Thochu are *p-ra-p* Chepang, *p-rah* Kasia.

The only nasal forms are those of Abor and Mikir.

RESULTS. (1). The archaic broad form *ngo, nō* &c. is current in 2, and 5 of Chinese and several of the Tibeto-Ultradian dialects, but in most cases with the *a* vowel, and in several with a final consonant, *k, t, s, ng*. From its great persistency in 5 throughout the Chino-Himalaic province, it appears that it was a current form of 2 when 5, by throwing off the word for 3, acquired the character of a distinct root, and was thus exempted from participation in the later changes which 2 suffered.

(2). Liquid forms of 2, both broad and slender, appear to have early been evolved, and to have been current along with nasal ones. The use of two or more names for 2 is common to the Chino-Himalaic with other numeral systems. The Chinese *liang, leung* 2 is an ancient form. It was probably the most common name in the dialect that first gave the numerals to Tibet, for it appears to be the parent of *lia, li, lā, lu, rī, ra, ru* &c., the form of 2 which must have been current when the existing Tibeto-Ultradian 4, 8 and 40 were produced. The Chinese, like the Himalaic, sibilant 4 appears to be referable to this form.

The Chinese form of 4 then current must have been *liang, leung*, (? *liang-liang* &c.) for a similar form which afterwards became sibilant, and acquired the character of an independent root.

(3). The current Himalaic slender nasal forms of 2 are local variations of the archaic broad nasal form. The ancient *ra, rī* cannot be derived from *ni*, the most modern form of *ngak* or *nyak*. The relation of the Himalaic *ni* to *lia, li, lu* &c. appears to be similar to that of the Shanghai *ni* to *liang*. Both have been derived through different channels from a primary naso-guttural root *ngok, nyok* &c. In the Himalaic province the *l, r* numeral appears to have fallen into disuse in 2 in nearly all the dialects, the current 2 being in general the nasal. The *l, r* form has lost its binary character, and in most of the dialects has concentered with the archaic labial prefix. The occurrence of the later prevalent 2, and not of the earlier *p-li* &c., in 7 may arise from 7 having been 0, 1 while *li* was used in 2, as in Chinese, Horpa, Manyak &c. That the quinary 7 was not formed till *p-li* &c. was disused for 2, appears from its not only taking the later current form of 2 but the later prefix.

To complete this review of the elements that enter into a comparison of the Himalaic numerals and throw light on the history of their diffusion, it is necessary to advert to the various forms of the prefixes and postfixes. These are simply the archaic definitives of the formation used possessively or qualitatively, as in the numeral systems of other formations that retain a possessive servile.

The labial (animate, masculine, fem.) is well distinguished. The others present some difficulty. The most important is the guttural, inanimate in the Tibetan system. As an archaic prefixed def. it has the variations *g, k; d, t; z, s, h; r, l, n*.

In the secular progress of glossarial mutation, the definitives have acquired various specific functions, and different forms are now in many cases equivalent to distinct roots. The dialectic variations are also considerable. From the commutation of all the consonants have the

labial, it is hardly possible to ascertain the number and forms of the primary Himalaic definitives. The history of the labial is clear. It still retains its primitive and earlier secondary applications, human, male and female, animate &c. Its transfer to inanimate objects was probably primordial, because in primitive science all things are living and sexual. The guttural was probably also animate and sexual, as in Chinese. In Anam it is fem. and inanimate, and in Bhotian inanimate. How far the other definitives are merely phonetic variations of the guttural, and how far they are primitively distinct, it is difficult, if not impossible, to determine with complete accuracy. In many cases they are clearly referable to it. But the prevalence of the liquid *la*, *ra*, *na*, *lu*, *ru*, *nu* &c. &c., as an animate, a masculine, and, to a less extent, as a fem. root, in the Chino-Himalaic vocabularies, makes it possible that the liquid def. is referable to it in some cases, and not to *k* through *t*, *d*. In many of the names for man and the lower animals it is a sex definitive or qualitative; and as the labial in all its forms was early transferred to inanimate objects, it is probable that the liquid was so also. The sibilant appears to have been a very ancient, as it is one of the most extensively diffused, human and sexual—generally feminine—forms of the definitive, and as it occurs with its primitive substantive meaning in the Chino-Himalaic vocabularies, it may have early been applied to inanimate objects. The easy interchange of *t*, *th* with *s*, *h*, and of *l*, *r* with *z*, *s*, renders the history of the sibilant as a distinct prefix very uncertain. But as the passage of the *g*, *k*, *d*, *t* into the *th*, *t*, *s*, *z* and *h* prefix is free from doubt, and the sibilant is not common as a substantive sexual root, it may be concluded that, in general, the sibilant prefix of the Himalaic glossaries is a secondary form derived from the guttural through the dental or the liquid. The common series of mutations are *g*, *k*, *kh*; *d*, *t*, *th*; *z*, *s*, *h*, *j*, *ch*, *y*; *t*, *ḍ*, *n*, *l*, *r*, *z*, *s*;—*l*, or *r*, *y*.

It is probable that in the earliest stage of the definitives the labial was applied to animate and the guttural with its variations to inanimate objects. In that stage the numeral and the qualitative probably took the def. of the substantive as in Zimbrian. But before even the oldest prefixes now extant in the glossaries concreted with the roots, they had either acquired an absolute use, or life and sex were attributed to inanimate objects.

After the proposed definitives became prefixes, they tended to merge in the root; but definitives being still current as separate particles, they were used with words which had concreted prefixes. In different dialects the common prefixes, or their forms and applications, varied. Thus while one used the labial chiefly or wholly, another used the guttural or one of its forms. The same dialect varied in different eras in this respect. A further source of diversity and irregularity in the prefixes of each dialect has been the mutual action of the dialects. Thus when one which affected the labial prefix came under the influence of another which used the guttural, and adopted it, some words might have the old and some the new prefix; but the old would, in general, either be disused or concreted with the root. Thus *ka-ri* would become *b-ri*, and then *ka-b-ri*. In the same way the archaic *k*, *t*, *s*, *l*, *r* prefix might merge in the root, or be retained as a prefix, while the later current definitive labial or guttural was superadded;—*da-ru* or *d-ru* would become *ka d-ru*,—*ki-ni*, *ti-ni*, *si-ni* or *s-ni*, would become *ka s-ni*, *ma s-ni* &c. In some cases the concreted pre-

fixed consonant appears to be the terminal and not the initial of the definitive, definitives sometimes having final *m*, or *r*, *n*, *ng*. Thus the Thochu *r* of *r-má name* may be from *tar-má*, Gyarung having *tir-ming*. The Bhotian *r-na ear* may be from *ter-na*, Gyarung having *tir-ne*. But the final *r* &c. may itself be the remnant of *ra*, *ro* &c. as Mr. Hodgson believes. While in one dialect an archaic prefix has thus conereted with the root mon-syllable, in another the full form is retained. This has been abundantly illustrated in the course of the miscellaneous glossarial comparisons. I shall only adduce one or two instances here. The *l, r* root for *bone* has the labial pref. in some of the archaic Irawadi dialects (Manipurian, Sakt), and *ka, kh, g, ta, te, sa, thu, so*, in the majority of the Southern dialects. In the Gurung *nu-g-ri* the guttural pref. is conereted and the nasal super-added, unless *nu* be a later Bhotian form of the root (*ru*). Garo has *g-ring*, Jili *kham-rang*, Maring *kh-ra* &c. In the Gyarung *t-ri road*, *t* is the current secondary form of the guttural preserved in the Thochu *g-ri*. In the Gyarung *ti-d-ri, skin*, *ri* is the root and *d* an older form of the dental prefix, of which the archaic guttural form is preserved in the Horpa *g-la*, Manyak *g-rá*. The Thochu *ra-pi* gives the pure root with the labial postfix. So *gha-da, star*, Thochu, is archaic; *g-ri* Manyak, an archaic conereted form; *s-g-re* Horpa, a slender variety of the same archaic form with a superadded prefix, in its turn conereted. The Gyarung *tsi-ni* gives this later pref. in a full form. The Bhotian *d-ro- o hot* is preserved in a more archaic form in the Takpa *g-ro-mo*. Gyarung, in *ka-s-man ripe*, superadds its current pref. to an archaic conereted form of the same pref. similar to the *de-* of the Manyak *de-mi*. Bhotian has the Gyarung form with its current qualitative postfix *s-min-ba*. Thochu has the pure root, *min*. In the south the archaic form of *de-mi, s-min, s-man* is preserved; Bado *ga-mang*, Tengsa *ta-man*. The Khari *te-nhing* (for *ming*), Angami *ke-me*, connect the dental Manyak form of the prefix with the guttural. The archaic labial is also found in the south, *pap-man* Garo. The names of animals afford several examples of the concretion of archaic prefixes and the adoption of new ones, e. g. *Monkey she-p-ri* Gyarung, *s-p-ro-bu* Bhot. (both the primary and secondary prefixes conereted); *Ssake m-rui* Takpa, *s-b-rul* Bhot., *kha-b-ri* Gyar.; *Ant ba-ra* Manyak, *tu-kh-ra* Thochu, *s-hh-ro* Horpa; *Crow nu-la* Tengsa, *a-lok* Lepcha, *a-b-lak* Bhot. *ta-b-rok* Gyar., *ha-tha-rak* Khoibu, *ka-luk* Serpa &c.

The roots having now been identified in their various forms, and the relative antiquity of these forms so far ascertained, the numerals are found to reflect some historical light.

The oldest units were the labial and the guttural. The former was disused in China before any form of the numeral system spread into Tibet; but its retention in the Chinese 8 and 100 shows that it was current when the full denary numeration was attained. The guttural was probably current from the first along with the labial as a definitive and unit. (Sec. 3). At all events it early became the principal unit. It appears to have been the only one current in the Chinese dialect that first gave the numerals to the Tibetan tribes, and even in the existing Chinese system the unit in 1, 3, 6, 7, 9 and 10, is the guttural root under different forms. When the system was first carried into Tibet the pure guttural was current as 1 in China. It is now only preserved, contracted, in 9; but some full forms remain in the Himalaic province, not only in 9 but in

1 and other numerals. These Himalaic names are a distinct proof of the archaic prevalence of the guttural unit in China, and of the Chinese system having been carried to Tibet before the era when dental, sibilant and liquid forms replaced the guttural.*

This purely phonetic change produced the existing Chinese system, in its oldest form. It is based on two typical forms of the modified unit, (1st) *chyuk, chuk, chut, duk, chak, lak* &c., whence *chhat, tsat* &c. 7, *chek, chit* &c. 1, and *luk, lak* &c. 6; (2d) *chum, chup, chap* &c. whence *chap, sip* &c. 10, *sum, san, sa* 3. The history of the changes in Chinese phonology, has made a great advance in the hands of Mr. Edkins, but the full elucidation of the development of the numeral system must await further progress. The final consonant has some dependence on the vowel, and especially on the tone. Most words ending in *-k* have the labial vowels *u, o* (Edkins' *Grammar of Shanghai* pp. 59, 60). An examination of the phonetic characters shows that *ü, á, é, ù*, prefer *-k*, while *ai, üi, é, i* prefer *-t*; *üi* also taking *-p* (Edkins on *Ancient Chinese Pronunciation*, Tr. China Branch R. As. Soc. Part IV p. 52). The vowel also influences the initial consonant. Thus in Shanghai *k* has a tendency to be pronounced before *i* like *t, dy* or *dj*. The regular final consonants taken by words in the long tones are *-ng, -n, -m*. The short or abrupt tone does not admit of these, but takes the corresponding finals *-k* (or *g*), *-t* and *-p*. The passage of *-m* into *-n* and *-ng*, and of *-n* and *-ng* into *-t* and *-k*, consequent on gradual changes in the vowel or its tone, would explain the existence of the same word in different ages or dialects in such forms as *kam, kap, kán, kang, kat, kak, kag*. The changes in the initial consonant may have some influence on the vowel and final. In compounds the different words exercise an influence on each other, and the Chinese numerals above 2 were originally all compounds. In these compounds the same unit and dual occupied different positions with relation to each other. Thus in 1 the unit stood by itself; in 3 it followed the dual; in 5, it had the dual both before and behind it; as the final element in 6 it followed it; in 7 it followed itself. As the last element in these compounds distinguished the number from the one immediately preceding, it would most readily yield to phonetic influences inducing a change of form; and when thus changed, it would be considered as the distinctive element, even before the preceding numeral ceased to be repeated. The *Milchanang sum 3, so-ruum 13, tuk 6, so-ruk 16*, may be examples of an euphonic change of the initial from *s* to *t* under the influence of the consonant of a preceding element. Such changes are common in all harmonic formations; and Mr. Edkins has shewn that Chinese is much more plastic in its sounds than has hitherto been supposed. The investigation of this subject must be the work of a Chinese scholar, and in a more advanced stage of the science of Chinese phonology.

The direct change from the labial to the guttural final is well illustrated by many of the Himalaic glossaries. Numerous current roots have had

* I do not overlook the possibility of the system having originated in Tibet and been thence transferred to China. The full discussion of the primary relations of the Chino-Himalaic tribes and dialects demands a section by itself. The community of the numeral roots in their older forms was probably as ancient as that of the pronouns. But the developed system appears to me to be Chinese.

both forms from remote periods, but the most archaic, as we have found in many instances, is the labial. Thus the oldest forms of the liquid root for *white*, *air* &c. are *lum*, *lom*, *ron*, *dum*, *dom* &c., whence *lung*, *lug*, *lang*, *lak*, *lot*, *lut* &c. For *water*, *river* &c. the forms *nam*, *nak*, *rang*, *rak*, *rik*, *rit*, *ri* &c.; for *mountain* *lum*, (*Kasia*) *ram*, *nom*, *lung*, *dung*, *rong*, *nong*, *rok* &c.; for *hand* *lap*, *lak*, *dak*, *chak*, *yak*, *let* &c.; for *boat* *tup*, *dok*, *dong* &c.; for *iron* *shom*, *sung*, *chur*, *chak*, *chat* &c.—are all current. Archaic labial forms of the common Himalaic roots are most common in the older Southern vocabularies—the Mon-Anam. In one of the later, the circumstance of its having been reduced to writing, enables us to trace the recent progress from labial to guttural finals. In Burman *tup* *fat* of the era when the alphabet was acquired, is now pronounced *tok*; *nhup* *mouth* is now *nhok*; a-rup *chiefly* is now a-yok *sho*. The change of *m* to *n*, and that of *k* to *t*, are also common.

The two types of the unit may have been contemporaneous in the same Chinese dialect from a very remote period, and even in the guttural era. The present system may have resulted from gradual changes in the same dialect—the different forms of the unit in higher numbers, to some extent representing the forms used as 1 in different ages. A very slight change, in the tone, vowel, final or initial, would suffice, in a monosyllabic and richly vocalised language, to raise the unit in a higher number to the rank of a distinct vocable, and enable it to dispense with the other member of the compound. The current 1 being used as an article, and much more frequently than higher numbers, would be more liable to phonetic changes; and the units of higher numbers, when their genealogy was lost, would not share in these changes. But it is more probable that the agency of more than one dialect is to be recognised in the different Chinese forms of the unit, as it so clearly is in the Himalaic province.

The archaic existence of the guttural root with both dental and labial finals is rendered probable by comparing the Bhotian forms for 10 in 8, *gyud*, *gyet*, *gye*, *ken*, *khya* &c., with the 10 of Mijhu *kyep*, *gyep* (in 30), Chepang *gyih*, Kuanti *kip*, Lepcha *tip* (in 11, 12 &c.), Limbu *gip* (in 100). Mikir *kep*,—these labial forms with the Chinese and Lau *sip*, *chap* &c. 10;—the Tenasserim *tsit*, 8, 10 and the com. Lau *chit*, *chet* 7, with *sip* 10;—and finally the current Chinese *chit*, *chek*, *cha'* &c. 1, *ch'hit*, *ch'het*, *tsat*, *sit* &c. 7, with *ship*, *sip*, *chap* &c. 10, and *san* 3. The Mon-Anam double form *lag*, *lak*, *lat* and *dap*,—*darn*, *lam*, *rom*, *nam*,—also shows that both finals were current at a very remote period. The *-ng*, *-n*, *-l*, final is less common than *-m* and *-t*, *-k*, and in some cases it may be derived from *-k*. But there are instances in which it is certainly a variation of archaic *-m* forms, and it may often have been the immediate parent of those in *-t*, *-k*. For example the unit of the Bhotian 7, *dum*, further modified in the Changlo *thur* 1, is from an archaic *dum*, *zum*, preserved in the Changlo *zum* 7. In 3, *sun*, *sank* changes to *song*, *sang*, *son*; in 10 it has the forms *sum*, *song*, *tham*, *san*; in 6 *dong*, *rong*, *luk*. The liquid form has the variations *rum*, *rang*, *rak*. The archaic *k* form with final *-m* is very rare, but the form *kun*, *gun*, *ken* &c. is widely preserved in 1, 6, 9, 10, 20 and 100. Mijhu has a variation in *ngun* 8, in which the initial *k* or *g* is also nasalised; and the Bhotian *gyud* 8 may be from a similar form.

As the labial form is not now found in 1 of Chinese or any of the Himalaic

systems, it probably preceded the other form as the principal current 1. In Chinese it became fixed in 3, 10 and 1000, when the current 1 changed to duk, tuk, chuk, &c. or it was received from another dialect.

Of the later current Chinese forms, huk, lak 6—referable immediately to duk, chuk—is older than the current 1 and 7, and it probably therefore lost its identity as the unit, and became fixed in 6, before chat s.c. became the current 1.

Of all the higher numbers 7 must have been the last to become a simple concrete numeral. It must have remained a compound, 6, 1, after the names of all the other numbers above 3 had become independent of the current unit.

As the initial consonant is the most essential part of a root, the principal phases of the unit may be distinguished with reference to it, as *primary* and *secondary*,—the former embracing both the older g-m, k-m, k-p forms, and the later k-k, k-t, g-d forms,—and the latter embracing both the older d-m, t-m, s-m, s-p, ch-p, l-m, r-m forms, and the later d-k, t-k, s-t forms. Each of these types has a series of variations, many of them marking progressive changes, e. g. the substitution of i, e, vowels for a, o, u, and the loss of the final consonant. Applying these distinctions to Chinese, we have found that it retains no full primary forms of the unit, but possesses a contracted one in 9; that 3 and 10 are older secondary forms; that 1 and 7 are later secondary forms; and that 6 is a later secondary form of a distinct type.

The history of the numerals in the Himalaic province is in some respects clear, but in others obscure.

The variations of the unit are numerous. The primary khun, khup, has taken the variations khung, khun, and is also preserved in slender forms kep, kip. The initial has varied to s, z, h, th, t, d, l, n, r; and these variations have occurred independently in different eras and in difference groups. The vowel has varied as much as the consonant. The final in -k, -t, whether a derivative from -ng, -n, or immediately from -m, has also varied in its turn to -s &c. A reference to the following table of typical variations will render the sequel more clear.

ghum,	ghung,	ghun
klum,	khung,	khun.
sum,	sung,	sun.
hum,	hung,	hun.
thum,	thung,	thun.
tum,	tung,	tun.
dum,	dung,	dun.
lum,	lung,	lun.
num,	nung,	nun.
rum,	rung,	run.

The direct interchange of r, l with s, h, also occurs; and the aspiration of r in some rare cases transforms it into the normal g.

The older primary form of the unit must have been current in 1, 6 &c.—as it still is in 9—when the Chinese system was first carried to Tibet and thence to the South. In Tibet it is retained in the Manyak s-kwi 7; in the Horpa s-ga, s-ka 10; and a form ge, corresponding with the Southern ken, khe of Dophla &c. is current as 1 in Gyarung, along with the modern ti, Mr. Hodgson giving *tir-mi tar-ge*, *man one*, as a form in use.

Mru has gaum in tsum-gaum 30, the vowel agreeing with that of 9, kau Kami, Lau &c. In a slender form it is retained in the 10 of Mikir kep, Kiranti kip, Mijhu kyep (gyep in 30), Chepang gyib, and Khyeng grip, (in 30, 40, 50). In later primary forms it is current in 1 of Taying ken, khing; and in 6 of Abor, Changlo, Newar and Karen, kung, khung, ghu, khu, ken, ke, a-k. Of this ancient phase of the Chinese system the Manyak 7, s-kwi; the Bhotian and Mijhu 8, gyud, ngun; the Horpa, Dophla, Garo and Murni 10, ga, ka, kang, kun; and the common Chino-Himalaic 9 are remnants. The n form occurs in the 9 of Newar, gun, and of Taying, kon-yong.

Twenty—like 19, 100, 1000—appears in many dialects to have been a substantive number, equivalent to *one score*, or *score one*. Similar forms of the guttural unit are preserved in it, the substantive word being lost as in 10, 100 &c., and the unit having itself acquired the meaning *score*. Singpho khun [=kun 10 Murni, gun in 9 and 100 New.], Cachari Bodo ma-khon, Sak hun [=kun], Shindu me-ku, Angami me-ku, ma-ku, Khari ma-khi; Changlo khai thur (thur 1), Bodo cho-kai ba, 20, khe-nga 100 (*scores* 5), Lhopa khe chik (chik 1), Lepcha kha-ka-t (ka-t 1) 20, kha pha-ngon 100 (*scores* 5), Gurung ku-ti. With final r or l for n it occurs in Khyeng kur, Manipuri kul, Mikir ing-kol, ing-koi, Arung ng kai (in 100 hai), Murni ho-kal (in 100 ho-kal nga, *scores* 5), Sunwar khal-ka. In the Kami ku suh 20 (ha suh 10), both ku and suh appear to have the power of 10 like the two elements in the Garo chi-s-kang.

Nicobari, one of the oldest dialects of the mixed Yuma-Manipuri and Mon-Anam group, has hing, eng in 1, gian, ken for 10 in 30, 40 &c. The aspirate form corresponds with the common Nicobari prefix, which, in the Barak group (Kasia, Mikir, Bodo, Namsang, Singpho &c.), is seen to be a derivative from the guttural (kin, gin =hin, sin). Nicobari has also an archaic form in 7, ha-kiat, corresponding with the Lepcha ka-kyok 7, ka-kyot 9. The Lepcha forms would alone show that the ancient form of the Tibetan unit had not become confined to 9 when the system spread South; and the distribution of all the similar forms establishes the guttural as the current unit of the Abor-Yuma or oldest Tibetan migration. As the extant forms are nearly all of the later type, khung, khun, kyok, kyot, &c., we cannot infer from them alone, that the older form in k-m or k-p was that of the first Tibetan migration. But as they are associated with k-p forms in a few dialects it becomes probable that the later forms are local or southern variations of the older; or that both -m or -p and -ng, -n forms were possessed by the dialects of the first migration.

The passage of the guttural into aspirate and sibilant forms—either directly or through the dental—throws further light on the distribution of the oldest Tibetan forms of the definitive and unit. There are remnants of a sibilant unit with final m and ng in 1, 10, 20, and 100 as well as in 3, and these appear to associate themselves with the forms in khung, khing, hing &c., both having a common point of departure in a typical khum, kham. Bhotian has tham in 10 and 100, and Mijhu has the sam e form with a unit power in its exceptional ha-tham 6. Traces of an s-m form are found in the Yuma group. In 10 Kaki has the full form som, som, Kyan chuom, and Car-Nicobar sum. From the Kami ha suh (ha=ha the prefix in 1), it is probable that the Khyeng and Mru ha are also from ha su or ha sum. Sak preserves the same form in 1 as in 10, and conjoined with a Dravido-Mon 1, su wa-r. This form associates

itself phonetically with *tu, du*, of Tengsa, Karen, &c., and with the *sum, su, shi, si*, of the Tibetan 3. In the southern Gangetic band, Changlo preserves a sibilant form in 13, *song*, corresponding with the Nipal and Burmese *song, thong* 3; and its *thur* 1, is a similar variety; while in the unit of 7, *zum*, the full Yuma form of 10 is preserved. Thus its *thur* 1, *zum* 7, *song* 10, and *khung* 6, are all referable to the same type. The Bhotian *dun* 7 is a link between the Changlo *thur* and *zum*. The Changlo *su* of 10 may be a late form of *khe* preserved in *khe-nga* 100.

In 100 Kumi has *chum wa-vi*, *chun-wai-re*, the same compound as the Sak *su wa-r* 1.

In the Tengsa *me sung a-nat* 40, and *me-sung pha-nga* 100, *sung* is used as *score*, and corresponds with the common use of the guttural unit, *khun, kha, ku, khi* &c. with that power. Sak, as we have seen, has *hun score*. The guttural passes in the Angami—Tengsa group into the sibilant, *ma-ku* Moz. Ang., *ma-tsu* Nag., *ma-khi* Khari, *ma-chi* Tengsa. Lau has *sau score* (*sau nung, score one*, Laos), a form corresponding with *tsau* 10 Mon, *hau* 10 Kami, *kau* 9 Chinese, *Lau*, *Kami*, *gaum* 10 Mru.

The Anam 6 *sau* may retain a similar unit, but it strongly resembles the Khyeng *sauk* (= *sa-uk, a-ruk*.)

Some of the Tibetan forms may also be referable to an archaic *tham, sun, chom* &c. The Manyak *cha* for 10 in *na-cha-bi* 20, (*che* is the current 10), *ta* 1, with the Thochu *ta* in 6 and 7, *a* in 1, are probably modern forms of *cham, tam*. Mijhu has the full form in 6 *tham*. The preservation of *ta* in 6, while most of the current Himalaic forms are from the Chinese *luk* or its earlier form *duk*, is consistent with this reference of it to the oldest Tibetan system. The Bhotian *chuh, chu* of 10, *tong* 1000, the Horpa *chho* of 6, *su* of 13, the Thochu *so* for 10 in 20, 30 &c. (changing to *ak-shi* in 100, which is the current form in 3 *k-sli*), the Manyak *si* of 3, *zi* in 8, and *chi* in 10, appear, from the connection of the forms in 3 with those in other numbers, to be remnants of the era when the unit had the form *sum*; and to be of equal antiquity with *cha, ta* &c., which are referable to *tham, cham*. The Horpa *chho* 6, like the Thochu *ta*, must be older than the reception of the Chinese system in which *duk, luk* &c. was the current unit.

As *zum, sum, song, dum, dun, tam* &c. was an archaic Tibetan and Southern form of the unit, and is largely preserved in 10 and other numbers in full and contracted forms, it is probable that many of the southern forms for 1 similar to the latter are also contractions of the *-un* form. The Sak *su* of 1 and 10, which has been referred to *sum* preserved in the Kuki 10, associates itself with the Karen *ka du, ka tu, ka ta*, the Tengsa *kha-tu*, Nag. *kha-tung*, and the com. contracted Yuma-Nipal *kha-t, ha-t* &c. Both *dum, tum* and *tam*, appear, from these forms, to have been current in the same groups. The Lepcha *ka-t* 1, *ka-ti* in 10, has a full archaic form in 11, 12 &c. *ka-tip* 11 (from *ka-t-tip, 1, 10*), *nye-tip* 12 (2, 10), while the adjacent Kiranti has the primary form *kip*.

For 3 the forms *sum* and *sam* appear to have both been current in the South from an early period. *Sum*, Bhotian, is the most common. It was the prevalent Tibetan form also,—the Horpa *su*, Thochu *shi* and Manyak *si*, being referable to it. On the other hand the Chinese and Gyarung *sam*, has so well defined a range in the South, that it cannot be considered as being everywhere a mere local variation of *sum*. The Chinese *sap* 10 and the Bhotian *tham, tam* of 10 and 100 (*gya-tham-*

ka 10 × 10), with the contracted *ta* of Thochu and Manyak (1, 0, 7) *cha*, *za*, of Manyak for 10 in 20, 30 &c., show that this was a distinct and archaically diffused Chinese form. From the vowel it appears to have been the older form of the Chinese *chak* 1 and *tsat* 7. In the South it is found in the Tengsa group *a-sam*, and in the two Nipal dialects which, in numerals as in the general glossary, have a large Tengsa element—Lepcha and Sanwar; with the Tengsa form in Muthun and Joloka *a-zam*; in Mikir, Garo, Bodo, Changlo and Dophla in the forms *ka-tham*, *gi-tham*, *tham*, *san*, *am*; in Mijhu *ka-cham*; and, lastly, in 5 of some Mon-Anam dialects, *pa-san* Mon, *san* Kasia, *ha Lau*, *chang Ka*, and in the Mijhu 6 *ka-tham* (the Mikir 3). In the 8 of Mon and Anam—which I formerly considered quinary, but which, from the analogy of the Chinese, Tibetan and Gangetic systems, is probably denary—a similar form occurs, Mon *ka-cham*, *ka-san*, Anam *tam*. As 10, the form is very rare. Dophla has *chang* in *rang-chang* 100 (10 × 10). Newar has *san-ho* 10, *sang-san-ho* 20, *gun san-ho* 100 (*gun* is the unit in 9 of Newar, 10 of Murni, *kun*). A com. East Gangetic 1, 8, 10, and *score* is referable to this form. The Mon-Anam liquid *l* is a variation of *tam*, *dam* &c.

The normal a form of the South appears to be *ka-cham*, *ka-tham*, *ka-san* (whence *a-sam*, *a-zam*), and this is Chinese in the Gyarung form *ka-sam*.

It is probable therefore that both this form and the more prevalent *sum* were received from Tibet.

From the distribution of the guttural and sibilant forms in *-m* and *-n*, it appears that the former early passed into the latter, and that both were current as the unit in the older Tibetan as in the older Chinese dialects, *-sam*, *song*, *sam*, *song* &c. 3, being but aspirate forms of *khum*, *khang*, *kham*, *khang* &c.; and *sap*, *sip*, *sung* 10, of *kup*, *kip*, *kang* &c.

The third variety—the liquid—was also current as the unit in the oldest southern system, and with the archaic *-m* final, passing into *-ng*, *-v*, *-g*, *-k*, *-t*.

In the Mon-Anam family Kambojan preserves an intermediate dental form in 10 *dap* [= *tip*, *kip* Lepcha, Kiranti &c., *tap*, *sap*, *sip* Chinese]. For 100 a similar form is current in Ka *dam*, while the liquid is found in Anam *t-ram*, Mon *k-lom*, *ka-lan* and Taying *ma-lum*. Some of the Yuma-Gangetic *-a*, *-u* forms may be contractions of the *-m* form, e. g. Burman *ta-ra*. The Lau and Kambojan *roi*, *roa*, may be contractions of the Mon form *lom*, but similar forms are also preserved in the lower numbers of other dialects. The full form is preserved in 5 *p-ram* Kambojan, Chong, *nam* Anam, i. e. 3 for 3, 2. The antiquity of this form of 3 appears from its retaining one of the elements in the archaic and obsolete Chino-Himalaic compound *kham-nga*, *dam-nga*, *tham-nga*, *sam-nga* &c., while Chinese, and, after it, all the Tibetan-Burman dialects, retain the other, *nga*, *ngo*. The Mon-Anam name is thus referable to a period when the word for 3 was still used in China along with that for 2, while the Tibetan is referable to a period when the Chinese had dropped the word for 2. Mon has the sibilant *pa-san*, *pa-sun*, and Chong has *chang*, forms of the unit similar to the common Himalaic 3 and to the 9 of Chong *sar*, Anam and Ka *chin*, Mon *chit*. For 8 Anam has *tam*, an older form *tham ram*, and similar to the Ka *dam* of 100. Kambojan *dap* of 10. The Savara *tamo-jit* may be an Anam acquisition. Remnants of the Mon Anam

liquid form of the dental Anam occur in the Nogaung and Khari *tha-nam*, *ta-nam* 50, which is the Anam 5. The Namsang *rah-ran* and the Murlung and Tablung lem 3, may be similar remnants, and not modifications of the Murlun and Tengsa *a-sam*, *a-zam*. Chepaing appears to have a vestige of the Mon-Anam system in its 8 *p-rap-zho*, which I formerly considered to be 2 (for 2, 10).

The only examples of the liquid form in 1 are the Lan nung—in Ahom ling—*Mru lhung* [=long 10 Taying?], Play Karen *lay*, Mapla na, and Mini *ti-ti-ro* [=ku-ro 10 Angami?]. The Murmi *gherik* and Gurung *k-ri*, formerly referred immediately to the Bhotian *g-shik*, are of uncertain age.

Forms less clearly referable to that with final *n* are common in higher numbers. The Tengsa *tha-lu* and Naga *ta-ro* 10 is a contracted form, retaining the Hm. pref. For 10 Angami has *ku-ro*, *ku-r*, *ke-ro*, *ke-r*, Mikir *k-re* (in 11, 12, 13), Namsang *ruak* (in 20, 30 &c.), Arung *ke-rou* (comp. *she-ruk* 6). The Tengsa group has an *a* form in Khari *ta-rah*, and the same form is found in Manipuri *ta-ra* and Shindu *merha*. The Abor group has lag for 10 in the Dophla 8 *p-lag nag* (10, 2), rang in the Dophla 10, nang in the Abor 9 *ko nang-ka* (1, 10), ling for 10 in 20 of one dialect in *ling-ka*, ying in the others in 20 and in 10. Taying has long, lo in 10 (*ha-long*), and yong in 9 (*kon-yong*). The Mijhu num 7 (6, 1) is a similar form of the unit. Garo has rung for *score* in 20 and 100 (*lung ba-nga*, *scores* 2) a form similar to the Mon 6 *ka-rung*. The wr. Burman *thach* 8 appears to correspond with the Dophla lag. Both are probably from rang, ram. The same form of the unit occurs in 100 of Karen *kà ya*, Singu *lo lat-sa*, (10 × 10), Kuki *ra-sa k-lat*, Burman, Khami *ta-ra*, Angami *k-ra*, *k-re*, Nogaung *ro-k-ru* (10 × 10), Khari *ru-k-rah*,—corresponding with the Lan *roi*, *hoi*, Kambojan *roa*, *roe*, Anam *ram*. For 1000 Angami has *k-ra-ke-r* (100, 10).

Chopa has *phi-dai* for 10 in 30, *khe phi-dai* (*score*, *ten*), and *phi-dang* in 50, *khe phi-dang sin* (*score*, *ten*, *three*); forms probably corresponding with the Abor rang, nang.

There are some other and rarer remnants of the liquid unit. That dialect of the East Gangetic group which retains the strongest Mon-Anam element—Kasia—has an archaic and peculiar combination of numeral names. 1 and 2 are Vindyanas in the Mon-Anam dialects. But while the latter have also adopted the Vindyan 3, Kasia retains a Himalaic unit in 3, *lai*, which is evidently a variety of the liquid unit of the Mon-Anam family. It recurs in 9 *han-dai*, which I formerly considered trimal, but which is more probably denary (1 from 10) like the other forms of the Chino-Himalaic 9. Chong preserves the same form in 10, *rai*, and Lan in 100 *roi*. In the Kasia 6 the unit has also a somewhat peculiar form *hin-fui*; *Ta-d* 10 may also be Mon-Anam, but its resemblance to the Yuma Gangetic *ka-t* &c. makes this doubtful. The Kasia form of 3 and 9 is retained as 1 in the Play Karen *loy* (Mapla na). The archaic prevalence of a liquid unit in 3 explains the otherwise anomalous liquid in the compound 5 of Bongju and Takpa. In the Bongju *rai nga-ka*, *rai* agrees in form with the Kasia *lai* 3, and as *nga* is the Chino-Himalaic 2, the name is the full archaic compound 3. 2. in the Kuki *ru-nga-ka* the 3 has the form of the unit that is common in 6 (*ru-ka*): while another dialect has *ra-nga*. Mijhu has *ka-hi* 5, *ng-run-si* 50 (5, 10). In the Takpa *lia-nga*, *lia* would also appear to be the unit and not the dual. The Abor *pi-la-ngo-ka*, *pi-li-ngo-ka*, despite the accordance of *pi-li* with

the common dual, must now be classed with the Takpa, Kasia, Bongju and Kuki names, and the li, la referred to the liquid unit preserved in ling, rang, ying 10, and nang 9,—the slender form being also, as we have seen, that of the Ahom 1, ling.

This identification of an archaic 1 in the disguise of a common form of 2 leads to another important correction. We have seen that the liquid was one of the most ancient and widely diffused unit forms in the South, and that it occurs with the archaic labial prefix,—*p-ran*, *p-rap*, *p-lag*, *pi-la*, *pi-li* &c. In Tibet it is still current as 1 in the Horpa ra. From the analogy of all the other China-Himalaie names for 100, those of Gyarung and Horpa, *par-ye*, *rhya*, must be the unit; and their true classification would now appear to be with the secondary liquid form and not with the primary guttural*, however strongly the Bhotian *br-gya*, the common softening of *gya*, *gye* to *ya*, *ye*, and Mr. Hodgson's orthography (*Par-ye*, *r Hya*) may be considered to support my former analysis (*par-ye*, *r-bya*). That these names are *pa-rye* and *rhya* is confirmed by the Mikir *pha-r*, corresponding with the more common *ta-ra*, *ta-ya* of the adjacent dialects. This recognition of a liquid form of the unit Tibetan names for 100, necessitates the recognition of an obsolete liquid form in 10, and this throws a new light on the liquid forms found in 8. The Bhotian and Manyak 8 are clearly 10, and it may now be inferred that the Thochu *kh-ra-re* (ra 1 Horpa), the Horpa *rhice*, and the Gyarung *o-ryet* (=rye 100) are also 10. This inference also involves the similar southern names, *p-rah* Kasia, *p-re* Garung, Murui, *re-ya* Kiranti, *ra* Milchanang (also 100), *cha-ria* Shindu, *riet* Kuki, *riyat* Mru, *rhach* Burm. &c.† Taving has the same amplified vowel but the —m final in its *p-lyem* 8 (comp. *e-khing* 6). If this conclusion be the correct one, the only names for 8 in which 2 is preserved are the ancient Dophla *p-lag* nag (itself a strong illustration of the mode in which the forms of the unit and dual approximate †), the Abor *pi-nit* and the Mikir *nir-kep*.

The Gyarung and Horpa community of numeral forms found in 100 and 8, occurs also in 7, the Gyarung *ka-sh-nes* being an old Sitan form similar to the Horpa *z-ne*, with the current guttural prefix superadded. Both also retain a guttural unit, Horpa in 10 and Gyarung in 1. The Sitan dialect which had the form *pa-ryet* &c. in 10, 8 and 100, may have originated the similar southern forms found in the older Yma dialects, Mru, Shindu, Mikir &c. The Gyarung element in the general glossary of the older East Gangetic tongues we have seen to be strong. The Mon-Anam *dap*, *dam*, *ram* and its derivatives belong to an older movement, but amongst the contracted forms it is difficult to separate those of Mon-Anam from those that may be of later Sitan origin. The East Gangetic

* But these *r* forms may have been from the *g* forms directly, and not through the dental or sibilant. *G* and a guttural *r* are phonetically close to each other, and the passage of *g* into *r* and that of *r* into *g* are common.

† The other languages in which 10 occurs in 8 with the liquid form are Changlo yen (for *ren*), Dhimal ye, Limbu yet?, Sunwar yoh?, Kumi, Kumi ya, Kyau ruet, Shindu ria, Kuki rai, riet, get (*g* for *r*).

‡ The Nogaung li-ri 40 (*pha-li* 4 Khari, *ru*, *lu* 10 Ngr., Khari) is a similar example of an euphonic assimilation of slender forms. In the Khari li-rah, 10 retains its proper form (*ta-rah*).

Liquid 10 appears to be a Mon-Anam remnant. Thus Khari has *nam* in 50 and *rah* in 10; and the Burman *ta-ra* 10 can hardly have a different origin from the Anam *t-ran*; or the Nagaung *ta-ra* 10, *ro-k-ra* 100, from the Mon *k-lan*. The only forms that are possibly later Siliu, appear to be those which have both the final *l* and the amplified vowel which is a remnant of the *rh-*, *ry-* [= *gh*, *gy*] forms of Horpa and Gyarung, and those which are clearly derivatives from the former. The Takpa *li* of *lia-nge* 5 may be one of these remnants, as it agrees with the Siliu *ria* in 8, Horpa *ŕ-ya* 100, *hiŕ* 8, but the Taying *lyem* renders this doubtful. The Takpa *li* of *kha-li* 20 may be from a corresponding absolute 10. But on the whole the majority of the *l* forms appear to be those of an archaic Siliu system which had them in 1, 3, 5, 6, 8, 10 and 100 as modifications of the older dental and sibilant forms, the latter also remaining current in some numbers or dialects. To this system the remnants in Mon-Anam, in many of the Abor-Yuma dialects and in some of the current Siliu are, in general, attributable. If the Abor-Yuma liquid 10 belongs to the early Mon-Anam era and not to a later Siliu, the Abor-Yuma 8 must be associated with it, and with the remnants in 3, 5 &c.

It is not always clear whether the vocalic forms are contractions of those in *-n* or of those in *-k*. But it is certain that both were early current. While the former agree with the Chinese 3 and 10, the latter agree with the Chino-Himalaic 6. Their full archaic forms *nah*, *lank*, *luk*, *ruk*, *nuk*, *rak*, *lik*, *lat* are similar to the unit preserved in the com. Chino-Himalaic 6 (1 for 5, 1), *luk*, *lak*, *lok*, *rok*, (whence *ru*, *ri*, *ni*, *no* &c.) A nasalised form similar to *nung*, *lung*, *ling*, is preserved in the 6 of Mon *ka-rung*, Chong *ka-dong* and perhaps in a Gond dialect *sa-rung*, a distribution which proves its currency in the era when the Mon-Anam family possessed the Gangetic valley. The Anom slender form *ling* is identical with the Abor *ling*, *ying* of 10, 20.*

The liquid forms extant in 1, 3, 5, 6, 8, 9, 10, 20 and 100 of different dialects may be recapitulated. —*dap*, *dam*, *rap*, *ram*, *nām*, *lom*, *lyem*, *dong*, *rang*, *rong*, *hang*, *ruog*, *nung*, *nyong*, *nun*, *nul*, *ran*, *lung*, *lon*, *ling*, *ying*, *rok*, *ruk*, *ruak*, *rak*, *rik*, *luk*, *lak*, *lag*, *lak*, *lat*, *dai*, *rai*, *lai*, *rei*, *lei*, *rou*, *rha*, *ra*, *ya*, *ru*, *ra*, *ri*, *re*, *r*, *la*, *lu*, *li*, *na*, *riyat*, *riet*, *ryet*, *rye*, *rha*, *rhie*, *ria*, *lia*, *ria*. While some of these are local and of uncertain age, many are clearly referable to the archaic migrations of the province.

The later secondary forms of the unit present considerable difficulty. In several dialects they cannot be referred to any of the extant older forms, and it is certain that there has been some transfer of these latest forms from dialect to dialect. But the question how far such transfers can be clearly traced is not easily answered, for the same phonetic series of mutations has taken place in all the languages of the province, however

* The direct passage of the sibilant into the liquid appears to have characterised the old Tibetan phonology more largely than I had ascertained when comparing the miscellaneous vocables. The minutest comparisons I have since made in grouping the southern dialects have shown that several of the liquid roots are only variations of the sibilant, and that exceptional sibilant and dental forms which I had doubtfully referred to the prevalent liquid roots are, in reality, remnants of the older phase of these roots. In Manyak, Namsang &c. *s*, *z*, *ch*, *j* have a strong tendency to become *r* or *l*.

irregular its operation on the different vocabularies has been in degree, in extent and in the particular vocables subjected to it. In the Chinese numerals the older secondary *sap* of 10, *sum* of 3, appears to be the immediate parent of the current 1 and 7 in their older form *chuk*, *chat*, *tsat* &c.,—that is 1 and 7, like 3 and 10, had the unit in the form *chap*, *sap* &c. before it changed to *chuk*, *chat* &c.

The common form in 6 *luk*, *lok*, is distinguished by its vowel from 1, 3, 7, and 10, and its older form *duk*, was probably from *dup*, *dum*, corresponding with the Bhotian *dun* from *dum* 7, (*sum* 3) and with numerous other Hindaïc forms in *u*, *a*. In the older Tibetan system the form of the unit in 6, *khun*, *chan* &c., appears to have corresponded with that in 1, 3, 10 &c. The Gyarung *tok*, and the original of the sp. Bhotian *thu* as preserved in *tuk* of Miloh, Serpa, Limbu and Kisanti, and *dok* of Garo, must have been derived from China at a later period, and when *dup*—probably the remnant of a distinct dialect from that in which a forms prevailed—had taken the form *duk* in Chinese.

The Gyarung *tu*, Lhopa and Murmi *dhu*, Bhutal *tu* and Bado *do*, are contractions of the same form. Their diffusion in the south appears, from their distribution, to be not older than the later Bhotian migration. The southern Bhotian dialect of that period must have agreed with the present spoken dialect of Lhasa in having a dental form.

The wr. Bhotian has a distinct form *d-ruk* agreeing with the current Chinese, and to it the Malayak *t-ru* is referable. The common Gangetic 6 is also derived from it. This form is certainly separated by a very slender phonetic boundary from *dok*, *rak*, *chuk*, *suk*, but as it is also the Chinese form, *luk*, and its great Southern diffusion attests its antiquity and persistency, there seems no reason to doubt that it was the form used by the southern Tibetan dialect which originated the predominant Gangetic system. The Gangetic vocabularies combine Sitan with Bhotian words, generally in older forms than the current or even the written Bhotian, so that 6 may be referred to the Bhotian element in the parent south Tibetan dialect. The form *d-ruk*, is from *de-ruk* (comp. *d-gu* 8 with the Takpa *de-gu*), and *de* is a euphonic secondary form of the guttural (*te*-, *gu*-, *ta*-, *da*-, *ku*-, *gu*-, *tu*-, *du*- &c.). The southern forms are *k-ruk*, *k-ru*, *k-ro* (Singpho, Garo, Chepang, Takpa), *tu-rak*, *tu-en*, *the-rak*, *chu-gu*, *so-ru*, *tu-ru* &c.

The preservation of other varieties of 6, in which the unit has older forms both primary and secondary, and the wide prevalence of the Chinese form, make it evident that the latter was carried westward by distinct movements from those which gave primary and secondary *-m* forms to Tibet.

The dissemination of the later forms of the Chinese 1 and 7 is much more doubtful. The Bhotian *chig*, *chik* has certainly a close resemblance to the Chinese *chit*, but it may be from a native *chuk*, *chum*. Possibly *chuk* is of the same age as *tuk* &c. 6, and was a Chinese form of 1 in the dialect which gave *tuk* to Tibet.

In the South there are no forms clearly referable to the Bhotian *chig*, *chik*, save the Kimwari and Serpa *chik*, Limbu *chit*, Newar *chhi*, and Lhopa *chi*.

The common form of 1 and 10 in the latest diffusive Gangetic system was similar to the older secondary Chinese forms in 7 and 1, but it appears nevertheless to have been local. It is well preserved in 8 of Toung-

thu, Khyeng, Sak, Tablung, Namsang, Singpho, Burman, Bodo, that, sat &c., and in later slender forms in several of the allied dialects. Similar forms occur in 10 and 1; but under the influence of the later phonology they have, in several dialects, become slender like the 1 of Chinese, Bhotian and Gyarung. Both broad and slender forms are sometimes found in the same dialect. Thus Bodo retains jat in 8, but in 10 has ji, in 1 ehe. Garo has chet in 8, sha in 1, chi for 10 in 11, 12 &c., both being combined in chi-sha 11. Namsang has i-sat 8, i-chi 10, *uan*-the 1; Singpho *ma*-tsat 8, si 10; Burman tach, tit, ta 1, shyit 8, she 10. The slender form is evidently borrowed in some of the dialects. It is clear that the broad forms have not been derived from the current Bhotian chik. The older Chinese form of 7, identical with some of them, is not found in Tibet. It is probable therefore that, like these Chinese forms, they are directly referable to the native labial form tham, tsam, sap &c. The Tengsa group preserves sep in Tengsa, corresponding with chet in Khari, while Mikir retains a primary form kep in 8, 9 and 10, and a similar form is found in the Kiranti, Chepang and Lepcha 10. The Nogaung tang is an intermediate form between tam (a Himalaic form of the unit still current, as we have seen, in 10 and other numbers, both in Tibet and the South) and tach, the old Burman form. The com. tsat, sat, chaz &c. like the slender Burman tit, are but later variations of tak, chak. This form is the distinctive one of the latest East Gangetic (Bodo-Singpho) band, and has been communicated by Burman to some of the Yuma dialects, as it is found in the 8 of Tong-thu that, Sak tseit, Khyeng sat. These dialects have received numerous other Burman vocables. Whether the common vocalic forms in 1 and 10 were contracted from -m, -p, or from -k, -t, forms, is uncertain. The labial forms may have become contracted in 1 and 10 before the t forms were evolved in 8. For example sha 1 of Garo may not be from shat, sat, the current East Gangetic form in 8, but from the older form sap. The same uncertainty attends the Tibetan vocalic forms in 1 ta, ti, ra. In the South the evidence is in favor of many of the vocalic forms being from sham, tam &c., through shang, tang &c. In 100 Arung has chang and Kuki shang, shan; i. 20 Dophla has san, sang. The cognate dialects have sha, cha, tsa, tha, sa in 1, *seve* or 100, (Nogaung, Tablung, Mulung, Joboka, Muthum, Namsang, Singpho, Manipuri, Bodo, Garo, Dhimal,) and it is clear that they are referable to the current forms in -ug, -u,—of which Nogaung, as we have seen, preserves an example in 1,—and these to the widely prevalent labial forms common to the Mon-Anam and Tibeto-Burman systems. The u forms appear to be chiefly of ancient Bhotian origin—Changlo being an example of a highly Bhotian system—and the a forms to be chiefly Mon-Anam, Sitan and Chinese.

Notwithstanding the examples of the passage of guttural into dental forms in the South and the possibility of this having happened in many cases of which no evidence remains, I think there can be no doubt that the most prevalent Himalaic forms of the unit are not local variations of the guttural, but were derived from the Chinese system after secondary forms had been evolved in it. The prevalent forms of 3 preserved in that numeral in Tibeto-Burman and in the 5 of Mon-Anam, agree with the Chinese 3 and must be referred to it in its existing s form and in older t, d forms. It may also be held as certain, from the abundant remains of this type of the unit,—not only in 3 and 5, but in 1, 6, 7, 8, 9, 10,

20 and 100,—that when the secondary Chinese system was transferred to the Himalaic province, s-m, s-p had not become fixed in 3 and 10, but that the t-m, d-m, s-m forms were the current unit.*

The conclusions at which we seem justified in arriving are therefore as follows. The typical form of the most prevalent Tibeto-Burman and Mon-Anam unit is dam, dum, tam, sam, sum, ram, lom &c. The common unit of both families had therefore the same Tibetan origin. Its source appears to have been the Chinese system in its older secondary form, that is when 1 and 7 as well as 3 and 10 had the forms dam, tam, sam, and when 3, 7, and 10 must have still been compound. The Chinese 6 of this era may also have had the same form of the unit. At all events there are Himalaic remnants of it (Thochu, Horpa, Mijhu).

The purer Mon-Anam appears to have been distinguished from the later, while it was affixed to one of the older, groups of Tibeto-Burman by the tendency to l, r, n forms in preference to sibilants. From the mode in which its forms of other words are intermixed in the Southern Tibeto-Burman vocabularies with the proper Tibetan forms, it is probable that the liquid 10, 100 &c. found in several of these vocabularies, or the liquid tendency in which it originated, was derived from the Mon-Anam family or from a common archaic East Himalaic or Sitan source. It is chiefly found in the older Yuma-Gangetic dialects, and cannot be derived from the prevalent forms of 1.† The Dravidian labial unit of Mon-Anam is also found as 1 and 10 in some of these dialects,—Mamuri ma 1, pa 10 (in 8 and 9), one of the Khyang dialects nu 1, Mijhu k-mo 1, kam-bum 4 (bon Anam), Angami po 1, Muthun, Joboka, Mulung and Tablung 10, ban, pan, Mru mi in pi-ra mi 20 (2, 10), Kund 10 in a-pun-re 20, m-phai-re 30, wu-pa-lu-re 40 (pa-lu 4), wi (= mi Mru) in wi-pa-re 50 (pa-n 5), wa in chun-wa-re or wai-re 100 (10, 10), Sak ta-fu 9, Kiranti thi bong 10, bha-p-ya 8 (bo-k Mon, va-ya Yerukala, ba-gu 2 Savara) Murmi chi-wai 10, Sunwar s-waj-ka 100, Nancowry fuan 4, tu-fuan 8, tha-fu 6, Car feun 4, tu-fud 6, a-wera 8. Limbu and Kiranti phang 9 (10 for 1, 10).

The primary guttural forms retained in different numbers in so many dialects, and also passing directly into the sibilant, indicate an older transfer of the Chinese system to the westward than that which produced the Mon-Anam and current Tibeto-Burman. The preservation of khung in 6 is itself a strong proof of a distinct migration prior to the era when dental, sibilant and liquid forms alone prevailed. Both in the Mon-Anam and Tibeto-Burman dialects 6 is either the current Chinese form lak, duk, or its immediate parent duk, tuk, which is probably a derivative from dum, tun, through dang, tung. The Mon-Anam family in its Gangetic era had dong, rung in 6 contemporaneously with luk, and from the resemblance

* In many of the southern dialects (Singpho-Bodo gr. &c.) the sibilant and dental of 1, 8 and 10 is referable to the guttural khun, klap, khing, khat, &c., but in others to the secondary Chino-Tibetan sun, sam &c.

† For example the old or written Burman rhach 8, ra 100, is evidently a distinct and in Burman an older form of the unit of 10 than the current 10 chhe, corresponding with the current 8 abyit and 1 tit. Doph-la has the same 8 lag and 10 rang, and Burman must at one time have had a similar 10. Namsang has the same type in 1, 8, 10 and 100 as the current Burman 1, 8 and 10, but in 20 preserves raak.

of the former to current varieties of *dam*, *ram* &c. an early Mon-Anam dialect may have had its prevalent *-m* unit in 6 as well as in other numbers.

The Abor and Yuma dialects preserve many of the most archaic forms of the Himalaic vocables. A large number are less contracted and softened than in the other groups, both Tibetan and Southern. They have been less affected by the later phonetic and glossarial modifications, whether spreading from Tibetan or from Southern sources. The guttural 1 and 6 of Abor &c., the 10 of the Mru 30, and the common guttural for *se re* may therefore be considered as remnants of the first Tibetan system that was carried to the South, and an evidence of the very great antiquity of the migration. How far this early form of the China-Himalaic system was disseminated in the South cannot be ascertained. If it had been that of the first Himalaic tribes that became predominant in the Gangetic valley and in Ultraindia, it is probable that some distinct traces of it would have been left in the Mon-Anam dialects. Although not found in the existing much mixed Mon-Anam systems, it occurs in others which retain some Mon-Anam numerals. Of the three hypotheses, 1st, that a Himalaic system having this unit preceded the Mon-Anam, 2d, that it was contemporaneous with it, one dialect or number having the guttural and another the dental and liquid unit, and 3d that it immediately succeeded it,—the 2nd is the most consistent with all the facts. The Mon-Anam vocabularies are largely and closely connected with the old Tibeto-Burman of the South, but the Dravirian and the peculiar native traits of the former as well as their distribution, show them to have been earlier. The presence of numerals of Mon-Anam forms in the older Tibetan systems of the South is in accordance with the general character of the vocabularies. But as the Tibetan glossary of the period when the Mon-Anam migration took place must have differed little from that of the first Tibetan tribes who followed them across the Himalayas, it is probable that the guttural unit was from the first coeval in the South with the sibilant and liquid. At present, however, we have no direct evidence that it was, the only native Mon-Anam unit that has been preserved being the dental and liquid; and it is therefore possible that while the more eastern parent of Mon-Anam had a secondary Chinese unit, a Tibetan dialect retained the archaic guttural unit of the Chinese and afterwards carried it south. In some of the Sifan dialects the guttural unit appears to have been succeeded by the liquid, and the earlier dialects that were carried south probably possessed both forms. The Gyarung-Horpa series still combines *ge* in 1 of Gyarung and *ga*, *ka* in 10 of Horpa, with a liquid form in 1 of Horpa and in 8 and 100 of both. The older Abor-Yuma systems appear to be referable to the Gyarung-Horpa. The Dophla system with the guttural in 1 and 6 and the liquid in 8, 10 and 100, must be an example of the earliest Sifan systems that were carried south. The difference between these and the cognate Mon-Anam appears to have been, that the latter had entirely lost the guttural unit while in the Sifan system it was used along with the liquid.

The most remarkable point in the history of the dual is the prevalence of a secondary form in 4 and of a primary one in 2 and 7. The questions that remain to be answered are, when and how this difference arose,—were the same forms ever current in all the numerals of the dual series,—

and how many versions of this series were carried to the South? On a cursory glance at a comparative table of the numerals, it might be interred that, in all the dialects, the common broad form in 2 and higher numbers, *ngat*, *nhat*, *nga*, *ngo* &c. preceded the slender current form *n-ik*, *nhit*, *nī* &c.; and that the latest and most contracted nasal form of 2 *nī* &c. was the parent of the *li* of 4. This was doubtless the phonetic order of the mutations, if *li* be from the nasal root. But it by no means follows that because *nī* is now the current 2 in several dialects, it is the immediate parent of the *li* current in the same dialects. The historical succession of the forms of a root in a particular dialect, has no necessary dependence on the absolute philological succession. A slender form may be contemporaneous with a broad form in one group for thousands of years before it is evolved in another group; and it may be communicated, in a special application, by the former and received by the latter as a substantive vocable while the only native forms continue to be broad. In a numeral series it is of course possible for a unit root or a dual root common to several numbers, to suffer phonetic changes in one number while it adheres to the old form in the others. And it might, at first sight, appear that the *li* of 4 was an instance of the kind,—*ngok* &c. having, by segregation and successive phases, attained that form in 4, but stopped at an older segregated one in 5, while a still older remained current as 2 in 7. But many facts concur to show that *li*, *lu* originated in one dialect or group and that it was received as a substantive name for 4 into other dialects which retained or acquired older forms of 2. Amongst these we need only at present refer to the almost universal prevalence of the *l*, *r* form in 4, its retention of the labial prefix where 2 and 7 have the guttural, and the traces of an archaic labial prefix in the unit series.

The frequent passage in the Himalaic vocabularies of the sibilant roots of Chinese, Scythic, Chino-Scythic and Himalaic itself, into liquids, appears to afford the true clue to the history of the numeral 4. The sibilant forms, I now think, in accordance with my first opinion *, must be regarded as the primary ones and the liquid as the secondary. All the Chinese dialects preserve the sibilant. In Tibet the passage into the liquid is illustrated by the Thochu *zha* and Horpa *lha*. The Southern forms appear, with a few exceptions, to be all referable to one dialect. The first great migration must have brought the form *pa-li*, *ba-li*, *ha-li* &c. † which became all but universal in the South; and its Tibetan type in the primary form is preserved in the Bhotian *b-zhyi*. The highly Bhotised Gyarung has the same form in 40, but liquid as in the South, *p-li*. As the identification of the Chino-Himalaic 4 with the com. dual of 2, 5 and 7 was founded on the hypothesis that the sibilant form was a modification of the liquid, 4 must now be considered as involving a separate root, for the primary form of the dual, *ngok* &c. cannot be derived from *si*, *zhyi*, *zlat* &c. As the liquid elements in 8, formerly considered to be 2 in the 4 term, have been found to be forms of the unit, it is not strictly necessary, for the purposes of this Section, to pursue the enquiry why the Chino-Himalaic 4 has a distinct root from 2. If *si*, *ri*, *li* &c. of 4 were really a distinct

* App. to ch. vi "Comparative Table of Chinese and Tibeto-Utilraindian numerals" pp. 23, 24. See also Sec. 4.

† Or its older form *ba-lu*, from a Bhotian *ba-zhyu*.

‡ Unless the Lau song, sang be the same root.

root for 2, it must have become obsolete in that number when the system became that of Tibet 1, and no remnants of it are preserved in other numbers. The latter circumstance is hardly consistent with its being a primary dual root of the system. On the other hand if it be a unit it is identical with the common sibilant and liquid forms of the Chino-Himalaic unit, and the Chinese system must have had a trinal basis throughout,—that is 4 must have been 3, 1, in like manner as 5 was 3, 2, and 7 was 6, 1. This mode of forming 4 is rare, but examples of it occur in the N. E. Asian and African provinces; and the Vindyan 4 is also trinal. As the Chino-Himalaic sibilant 1 and 3 has forms precisely similar to 4, both in 3 and in other numbers, I do not hesitate to transfer 4 from the dual to the unit series.

When the first Himalaic dialect was carried south a broad o, u form of the dual was common to 2, 5, 7, and, probably, to 8; and it appears to have had the labial prefix throughout, as it preserves it in 5, and in a few dialects later forms have it in 2. The unit associated with this form of the dual must have been one of the oldest carried South, and as the later form was contemporaneous with the Tibetan gyud, ryat &c, it is probable that the ngo, uhu, dual was that of the system which had khung &c, as the unit. In the Abor group both khung and ngo (2) are preserved.

When the next great migration took place the predominant Tibetan dialect had a numeral series which had the form nag &c. in 2 and in the quinary 7,—associated with tam, sum, ram &c. in 1, 3, 10, and in the denary 7; and the labial prefix had given place to the guttural. Dophla retains *ka-nag* in 7, *nag* in 8; and in 2 Burman wr. has *nach*, Tengsa *a-nat* (for *ka-nat*), Changlo ngik. With a few exceptions the Southern Yuma-Gangetic forms are modifications of this form. In Tibet the broad vowel is retained in Thochu and Manyak *nga, na* and in the Horpa 2 of 20 *na*. In the other Tibetan dialects and in most of the Southern ones slender and contracted forms now prevail. The change has generally been local. The Horpa *z-ne* and Gyarung *sh-ne*s of 7 are from a form of 2 similar to the Gyarung *hi-ni*s in 20 and Bhotian *g-ni*s 2. Both are probably from one dialect, perhaps Horpa, which has a similar form of the prefix in 9 *s-ga*. It has *uge* in 2 which may have been *hi-nges*, whence *sh-ne*s, *z-ne*. The Gyarung *sh-ne*s of 7 is not the current *ka-ne*s 2, but a conerated vocable, as it takes the current prefix *ka-sh-ne*s. The later southern forms have many varieties, and some similar to the Tibetan, but they are all of local growth. Thus the Bodo and Garo *s-ni* 7, although so close to the Horpa *z-ne*, is from *si-ni* preserved in the Mikir *hi-ni* 2 (Singpho *si-nit* 7); and *si-ni* is from *hi-ni*, *gi-ni* Garo. In the Yuma 7 *n* becomes *r*, but the prefix identifies it with these Gangetic forms. Comp. Tengsa *ta-ni*, Sak *tha-ni*, Shindu *sha-ri*, Kumi, Kuki *sa-ri* &c. The associated form *iut* &c. shows that *ni, ri* belongs to the later ngak, ngik, ngit series in 2.

The Himalaic form of 2 brought south by the Mon-Anam family appears to have been the broad form with the labial prefix preserved in the Tibeto-Ultraiidian 5. In the Bongju, Kuki, Tapka and Alor 5 and in the Dophla 8, this form of 2 is conjoined with the liquid 1 (for 3 and 10), whence it is clear that when that form of 1, 3 and 10 was current, the Chino-Himalaic form of 5, ngo, uga, was current as 2. If the Lau song, sang is from an *l* or *n* form it was probably one of the varieties of the Mon-Anam 2. The current 2 in all the other dialects

of this family is the Dravirian labial. Although the traces of the original Mon-Anam 2 are not very strong, they are decided enough to lead us to the conclusion that the dual had a form similar to the prevalent Himalaic 5, or, in other words, that this was the form current in south Tibet at the era of the first great Himalaic migration. Although the labial prefix was that of 2, 4 and 5, and the unit also had it, the Mon-Anam 6 and 100 (*h-lom*, *t-ran*) show that a unit having the guttural, passing into the dental and sibilant, prefix was early current. The Bhotian *d-gu*, Thochu *r-gu* 9, is another form of the unit with the same archaic secondary form of this prefix.

The later slender forms, both of the prefixes and roots, connect many of the southern systems, although the movements and special borrowings disturb the agreement thus induced. The progress of aspirate, slender and contracted forms of the guttural prefix is illustrated by the dual in 2 of Garo *gi-ni*, Mikir *hi-ni*, 7 of Singpho *si-nit*, Nams. *i-ngit*, Kasia *hi-nian*, Garo and Bodo *s-ni*. This group or movement centres in the western extremity of the Garo-Singpho band. Another well marked group, which breaks through this band or has been broken through by it, is distinguished by similar changes in the broad forms of the prefix. In 2 Angami has *ka-ne*, the adjacent Tengsa group *a-nat*, (Gyarung *ka-nes*). In 7 the Yuma dialects have *tha-*, *sha-*, *sa-*, the Tengsa gr. *tha-*, *ta-*, Chepang and Sunwar *cha-*. The original *ka-* is preserved in the broad Dophla *ka-nag*. In 9 the Yuma group has *tha-*, *ta-*, Chepang *ta-*, Shindu *cha-*, Singpho *tse*, Garo *sh-*, Bodo *ch-*. In 6 the Yuma gr., Tengsa gr. and Lepcha have *ta-*, Shindu *chu-*, Ang. *sa-*, Mikir *tho-*, while Singpho, Garo, Takpa and Chepang retain *k-* and Mon *ka-*.

The unit 7 (6, 1 or 1) is found in Chinese and Lau; in Thochu, Manyak and Bhotian; in Changlo, Lepcha, Milchawang, Mijhu and Mikir. The dual form (5, 2, or 2) is found in Tibet in Harpa and Gyarung (2), and in nearly all the Southern dialects. It was the form of the dialect that gave the prevalent numeral series to the South, and it corresponds with the 2 of that dialect, thus proving that 7 was still quinary or dual at the period of the great Tibetan migration, or immediately before it. No example of the full form is preserved. The quinary Kanihojan *p-ram pil* (5, 2) belongs to the earlier Draviro-Himalaic system of the South.

The principal inferences bearing on the historical relation of the Himalaic to the Chinese numerals are as follows. 1st. The earliest Chinese dialect that gave numerals to Tibet had the primary guttural form of the unit either alone or with later forms. It is still current in 10 of Harpa, in a 1 of Gyarung, in 7 of Manyak and in 1, 6, 7, 10, 20 of some southern dialects. There is no direct or conclusive evidence that it was ever current in 3 or 5, either in Tibet or the South; although the close resemblance of some of its forms in 10 to the Chinese sibilant 10—and of the latter, and similar current cis-Himalayan sibilant forms, to the Chinese 3—make it probable that the earliest Chinese system of Tibet had guttural forms throughout. The 8 and 100 must have had similar forms of the unit, and not the labial of the current Chinese. The dual in this system must have had the form *ngong*, *ngang* or *ngok ngak* &c. 2d. The later Chinese phase, which was communicated to Tibet before the great migration to the South, is very distinctly marked by the forms of 3, 4 and 6.

Each of these is a peculiar modification of the primary form; and the deviations from it and from each other are so considerable, that they must belong to an age long subsequent to that of the exclusive currency of guttural forms and when the system had become partly concentered. Whether these forms originated in one dialect or in several, their combination in a single current system cannot belong to the earlier eras of the formation. The form in 3, sam, sum, &c. must have long been the unit exclusively current in a Chinese system. The form in 4 is a later form, as it wants the final consonant; the initial, however, having a stronger aspirate. The current form was probably preceded by one closer in the vowel to 3, like that preserved in Thochu, Horpa and some Southern dialects. The still later liquid 6 may have originated in a western Chinese dialect which had a similar form, lum, lam, lung, lang, luk, lak, in its current unit, and was associated with those ancient Sifan or East Himalaic dialects which possessed a similar unit and gave it to the South, but it is more consistent with the other forms of the system to refer it directly to sum, suk &c. Whatever may be the history of the production of the Chinese numeral system which ultimately had these forms fixed in its 3, 4 and 6, it is clear that, after they were so fixed, it became the most influential system first in China and Tibet, and then, through the great Tibetan migration, in the South also. The prevalent 4 and 6 appear to have always been concentered and substantial names in the Himalaic province, the connection between them and the unit having been lost before they were received from Chinese. The current form of 3, on the other hand, appears to have retained its unit power, after this late Chinese phase became that of the Himalaic province also, as it undoubtedly remained current with this power in 7 and 10, and probably in 1 and 8 also. The slender form of the dual current in the Chinese 2 in a contracted form is so widely prevalent in the Himalaic province in 2 and 7, that it must be associated, in the form nging, ngik &c., with the later Chino-Himalaic form of 3, 4 and 6. The vocalic but broad 2 of 5—which is almost universal—obviously belongs to the same phase. The current Chinese 1 and 7 appear to be later in form. The labial 8 and 100 were probably not possessed by the western Chinese dialects, until after the period when they gave the secondary forms of the unit to Tibet. They have no connection with the other Chinese numerals and no representatives in the purer Himalaic systems. It is probable therefore that this unit was preserved in a northern Chinese dialect—perhaps the Kwan-hwa itself—which became that of the predominant Chinese nation. The Himalaic systems present many examples of a similar persistency of a native or older form. Thus the Kwan-hwa system, in a late form and embracing this labial 8, has been widely spread over Ultraindia by the conquering Lau tribes, but the 1 and 2 are wanting, in the Lau dialect, native names taking their place. The northern dialects have the Chinese name in 100, but it has not established itself in the southern.*

* As the forms of the same root varied from era to era in different numbers and in different dialects, and as these forms did not attain the character of independent names at the same period, any attempt to reproduce the system as a whole in its successive phases would be liable to the risk of associating some forms that may never have been current together

Further light will be thrown on the history of the Chino-Himalaie numerals when we compare them systematically with the Scythic, Caucasian and African. But our examination of the Chino-Himalaie, Semitic and African must be followed up by that of the Scythic and Caucasian, before we can enter on such a comparison. All the numeral systems of the Old World are more or less connected, and point to the diffusion of its earlier arts and civilisation, or of the races themselves, from one family. For example both the primary and secondary forms of the Chino-Himalaie unit are found in the other East Asiatic and the connected Western systems. The most important of the secondary forms sam, sum, sap &c. is so widely diffused that, on an examination of a few numerals, it might be thought probable that it was evolved from kam, kap, at a very remote period and before any extensive dispersion of the ancient Asiatic system. Both the primary and secondary forms certainly appear to have been circulated together over other provinces besides the Himalaie. But a comparison of all the Old World systems leads to the inference that the connection of the Chino-Himalaie with the Scythic and more distant numerals is through the primary guttural forms, and that the recurrence of identical secondary forms and types in different provinces is, in general, attributable to the same cycle of phonetic change having been independently repeated in each family of language. There are doubtless examples of a transfer of later forms from one family to another. But it requires strong evidence to establish

in a single dialect. If we were to assume that, at one time and while the names still remained compound, a dialect existed in which the primary form of the unit had been lost and sam, sap was its only current form, the trial system might be thus presented.

I	1st series.
II	sam
III 2, 1	nga
	nga-sam
IV, 3, 1	2d series.
V, 3, 2	nga.sam-sam
VI, 3, 3 (or 5, 1)	nga.sam-nga
	nga.sam-nga.sam
VII 6, 1	3d series.
	nga.sam-nga.sam—sam

In all the compounds of the 2d and 3d series, the last word would be the distinctive and permanent one. The office of the first common term of each series would be merely to mark the series, and when a slight phonetic change was induced in the last, this would itself suffice to mark the series, and the first term would become a needless incumbrance. Thus if, from the action of the preceding elements of sound, or by acquisition from another dialect, the name of 1 became sang or sak, the sam of 3 would be enabled to dispense with the nga— not only in 3 but throughout the higher series of which it forms the radix. So, if the distinctive or final sam of 4 became sum, su or si, the initial nga-sam, or its remnant sam, might be rejected. In like manner a change of nga 2 to ngi would enable the distinctive nga of 5 to reject the preposed term or its remnant.

the foreign origin of a form that can be deduced from a native archaic type by the ordinary phonetic evolutions of the family.

The most widely prevalent of the older secondary forms of the guttural unit is *s-m, s-b*. Taking the Chino-Himalaic systems in their existing forms, it is clear that this has been the most prolific type of the unit. It was the current unit of the era when the present 3 became concreted. It is preserved in several dialects in 10, 8 and 5 and several common forms of the current 1, 8, 10 and the unit 7 (6, 1) are referable to it. It is the integral form of the latest Chinese unit, being preserved in 3 and 10, and in a modified form in 1 and 7. If any direct connection between the historical Chinese system and other systems of the Old World can be established, it must be through this form.

In 1 the Scythic systems have either the more archaic labial unit of Dravido-Australian—preserved in Chinese in 8 and 100, but obsolete as a unit when the system spread over the Himalaic province—or other forms of the guttural, dental and sibilant.

The most com. Scythic 3 has a primary guttural form or a modification of it, *kol, gur, kuj, chud* &c.; *teng, dong* &c. The labial and the liquid unit are also found in the 3 of some groups. Beyond the proper Scythic limits—or in those of the earlier or proto-Scythic movements—the Chinese form is found in Caucasian, *sa.mi, sa.mi, ju.mi* &c. and also in Semito-African, but preserved in Egyptian only *sho.m, sha.m* &c., in which it is referable to a native Semito-African *kh.m* &c.

The Chinese 5, as we have seen, is a remnant of 3, 2, and the term when the present form of the system retained its full integrity, was *sa-m-go* &c. The 5 of the Mon-Anam dialects retains the 3 in the forms *sa-m, cha-m, ram* (for *sa-m*). The Samoide *sa-m, sum, sab, saba, soba* &c. 5 has the same form with the postfix *-rigo, -lik* &c.; but from the Tungusian *tong, sun* &c. and the Mongolian *ta-bun, tha-ba* &c. in which *-bun, -ba* is the common labial possessive postf., it is probable that *soba, saba* &c. is identical with the Mongolic form and that is radically *so-ba, sa-ba*. Caucasian has the same form of the root *chu-thi* and in Abkhassian the same postfix *chu-ba*. The *s-m, s-n* form is very common in the African province, but as it is *k-m* in Semitic and there are examples of the passage of *k-* into *s-* forms, the latter appear to be historically connected, not with the secondary Chinese form, but with the primary Chino-Scythic *k-m, k-n*. The Ugrian and Turkish families have the archaic labial unit in 5.

The Scythic forms of 6 appear to be all, or nearly all, quinary (5, 1 or 1) and not trinal as some phonologists maintain. In this respect they accord with the Chino-Himalaic. With some of the Himalaic tongues, the Semitic, African and Indo-European they have, the older sibilant and dental form of the unit, and not the later liquid of Chinese and most of the Himalaic systems. It is not here intended to contest the trinal character of the Indo-European and Semitic 6, although the fact of 3 being itself the unit must render it uncertain—when other evidence does not exist—whether a unit form of 6 be a remnant of 5, 1 or of 3, 3. In African systems both forms occur.

The Ugrian and Turkish 7 has the later form of the sibilant unit as in Chinese, *site, sis, sat* &c. Some Ugrian dialects that appear to have the older form *shi-m, ta-b, sa-b* are contractions of *siz-m* &c. This form is also Indo-European *sa-p* and Semito-African *sa ba*, and in both

families the labial appears to be radically postfixual as in Scythic.

The Scythic 8 and 9 are mostly denary like the Chino-Himalaic, but some quinary names are also current,—Koriak, Kamshatkan, some of the Yeniseian. A form of 10 similar to the Chino-Himalaic *sum* &c. is found in a Samoede 9 *tu-ma, thun*. *Ten* has the archaic labial unit; the primary guttural *k-m* as in some of the Himalaic names; and later secondary forms similar to the Chino-Himalaic *t-s, l-k* &c. But the connection indicated is through the primary forms. The Japanese, Koriak and Yukaghir names for 9 preserve a guttural unit like the Chino-Himalaic (*kun, chun*.)

On the whole we may conclude that the Scythic and other Aso-African numeral systems (excluding the Dravido-Australian) are more closely connected with each other than with the Chino-Himalaic; and are only connected with it through the older primary forms,—the Himalaic branch preserving examples of these similar to the Scythic &c. although lost in China.

The general conclusions at which we have arrived are these. The first Chinese dialect that gave numerals to Tibet preserved the guttural unit and a broad dual. The Tibetan system spread to the South while it retained this archaic form. The next Chinese dialect, or phase of the numerals, that influenced the Tibetan had the secondary unit *sum, sum, sap* &c. in 1, 3, 7 and 10. The Tibetan system which originated in it was the parent of the prevalent Mon-Anam and Tibeto-Burman systems. Two archaic movements to the south at different periods after this form was acquired, are traceable. The first had the labial prefix,—the unit had a decided tendency to pass into the liquid form,—and the dual appears to have had broad forms. When the older Sitan-Gangetic tribes followed the Mon-Anam, if indeed they can be separated, similar forms of the unit and dual were current in East Tibet. In the later and greatest Tibetan movement the guttural prefix prevailed,—the unit had broad dental and sibilant forms,—and the dual had broad, passing into slender, nasal forms.

Historically and more exactly stated, these inferences stand thus. When the Chinese system was received in Tibet secondary or contracted primary numerals had already become fixed and concentered, in their present forms nearly, in 4 and 9 of the unit series and in 5 of the dual. The enquiry into the phonetic changes and dialectic intermixtures which resulted in the establishment of these names, belongs to Chinese and not to Himalaic phonology and ethnology. But the current unit in 1, 3, 6, 7 and 10 (as well as in 8 and 100) and the dual in 2 and 8 were not so fixed. The numeral dialect that first took root in Tibet preserved a guttural unit, of which undoubted primary remnants are found in 1, 6, 7, 8, 10, 20 and 100. Some of the secondary Himalaic forms are also referable to it. The Himalaic forms *gaum, khung* (for *khum*), *gyeb, kip, kep* (whence *kyok, gyud*) are the originals, with modified vowels, of the Chinese *chap, shap* &c. 10, and the first Chinese dialect of Tibet must have had similar forms not only in 1, 7 and 10, but in 6 and 8 also. This dialect had probably the secondary form *sum, sam* in 3, as it is equally universal with the forms in 4, 9 and 5. It may have been fixed in this dialect; but that from which it was derived must have preserved it as the current unit in 1, 3, 7, 8, 10 &c. and simultaneously or subsequently communicated it to Tibet. In this dialect it appears to have assumed the form

suk, chuk, duk, luk &c. in 6 before it was carried to Tibet, as there is no *s*-*m*, *s*-*p* form in that numeral in any of the Himalaic dialects. To the era when this phase of the unit prevailed a large number of the current Himalaic forms closely adhere, from which it is certain that during this era a Tibetan system was carried south. Among the best examples extant are the Bhotto-Changlo *zum*, *du* of 7, Kuki *sum*, Sak *su*, Bhotian *chu*, Thochu *du* of 10.

In several dialects, Sifan and Southern, the sibilant changed to *r*. A dialect which had this form was very influential at one period. In the south the typical forms are *lum*, *lam*. The latter is widely current in various forms, one of the most common being *rai*. The antiquity of this contracted form appears from its being found in 1 of Play Karen, 3 of Kasia, 5 (for 3) of Bongju (*rai*) and Mijhu (*lei*), 8 of Mitehanang, and Bongju, 10 of Chong, and 100 of Kambojan (*roe*), Siamese (*roi*, *hei*), and Bongju. The frequent occurrence of the *r* form in 8, or in 8 and 100, where 10 and 1 have the sibilant form, must arise either (1st) from the same dialect having at one time used both forms in 10, or in 1 and 10, or (2nd) from having replaced the liquid of 10 by the sibilant derived either from its own 1 or from the 10 of another dialect. Different forms of the unit have been used both synchronously and successively in several of the dialects for 1 or 10. Several express 10 by *one ten*, and in such a compound an archaic unit will be preserved in *ten* and the current unit in *one*. Thus in the Taying *ha-long* 10, *long* corresponds with the 10 of 8 and 100, while *ha* or *sa* is a com. current unit in 10 and 1 of Yuma-Gangetic dialects. The liquid appears to have been the 1 of the archaic Abor-Yuma and Mon-Anam groups. In many dialects it has been replaced in 1 and 10 by the sibilant that characterised the later diffusive system of the South. In others again the sibilant—whether from the Tibetan *sum*, or from the Tibetan *gyum*, *khum*, *kap* &c.—has been replaced by the liquid or by the Dravirian labial.

The numerous southern systems are reducible, in their Himalaic element, and both in root and prefix, to two great and one or two minor migrations from Tibet, not differing very widely in the forms brought by them,—to a few special lines of movement in the South,—and to some phonetic changes that have taken place since the migrations, and of which the centres and lines of dispersion are more or less distinctly marked. Precisely the same movements and changes are indicated by the distribution of the miscellaneous vocabularies that have been analysed and compared in the preceding pages; but before their evidence can be fully understood and historically marshalled, we must specially examine the Mon-Anam family, and the effects on all the southern Himalaic vocabularies of the early contact of the Mon-Anam dialects with the Dravirian of the Gangetic basin.

The preceding examination of the Himalaic numerals is far from sufficient to explain their history in the separate groups and languages. In each of these the names have been more or less affected by successive phonetic changes, internal and external, and the consideration of each by itself will throw further light on the ethnic movements of the province. In some of the dialects almost every numeral belongs to a different age or phonetic phase, so that the series has a singular character to that of a

geological section exhibiting a succession of unconformable strata, some derived from the waste of subjacent ones and others from distinct sources.

The annexed table of all the published numerals from 1 to 10 of the ancient Chino-Indian province, will greatly facilitate my readers in their comparisons.* I regret that I did not commence, instead of finishing, my own by compiling it, as the means which it gives of noting at a glance all the variations of each number, and all those of each root, would have saved me much labour and not a few mistakes.

I have included the Dravirian, as the earlier Himalaic—the Mon-Anam—combine Chinese with Dravirian roots. Savara has several peculiar numerals and the analysis of the table requires some explanations. 1. The root *bo* occurs also in *bo-kodi* 20 (*one score*). 2. The guttural postfix shows this dialect to be very archaic. 3. *Ya-gi*, this appears to be 2 (for 2, 1), the other dialects, S. Drav. and Vind., having 1 (for 2, 1), 6 *ku-d-ra*. This evidently compound term appears to be an archaic full name, and as 6 is 1 in the S. Dravirian dialects, it is probably 5, 1; *d-ra* corresponds with the Kol *tu-ra*, *tu-r* which I have hitherto regarded as Himalaic. It is to be hoped that there are still some unpublished Vindyan systems which will throw further light on its origin. Meantime there are some indications of Dravirian affinity which have induced me, although with much hesitation, to analyse it in the Table as a Dravirian compound. *Ku* is the com. Drav. postfix, but *tu* is not the *u*, *o* of the S. Drav. root (for *ya*, *vo* 1). It may however be the *to* for 1 in the Telugu and Chentsu 9. *Ku* must be from an element in a name for 5. Dr. Stevenson in the Toda vocabulary furnished to him by Mr. Greiner gives *khu* 5. This is the guttural unit preserved in the Kol and Savara 10, and in 5 may either have represented 3 (3, 2) or 1 (4, 1) 7 *gu-l-ji*. The *gu* must here also represent 5 and not 2. 8 *ta-mu-ji*; *mu-ji* is the unit for 10 in the form occurring in the Talava *mu-ji* 3 (Brahui *mu-si*); *ta* is not a Drav. root for 2 and is probably a contraction of a form like *e-ta* (Toda, Mal.); the Telugu *e.ni-mi-chi* is a similar compound.

NOTE.

In lately issuing separately ch. v and the first 5 sections of ch. vi, I prefaced it by some explanations, which I subjoin here also. The remarks on the Dravirian numerals will be found to elucidate the analysis of the Table.

"The readers who have accompanied me from the first do not need to be reminded that the publication of this work has extended over several years;

* In writing out the names for the Table I overlooked the Rakhoing *kh-rauk* 6, and the correct analysis, which I had given in the text, of the Burman *khyauk*, *khyok* and the derivative Sak *khyouk* as *kh-yauk*, *kh-yok*, *kh-youk*.

The elliptic and vary composite Deoria Chutia numerals having also been omitted I give them here.

1 <i>du-g-sha</i> (Garo).	4 <i>du-g-i-chi</i> (Ahom).	7 <i>du-gu-chi</i> (Ahom).
2 <i>du-hu-ni</i> (Garo).	5 <i>du-g-i-mu-a</i> (Vindyan).	8 <i>du-gu-che</i> (Garo).
3 <i>du-g-da</i> (Garo).	6 <i>du-gu-chu</i> (arch. Him.).	9 <i>du-gu-chu-ba</i> (Garo ju).
		10 <i>du-gu-chu-ba</i> <i>du-g-she</i>

and that the increasing light thrown on the comparative characters of each family of language, during the revision of the section relating to it, has disclosed defects in the preceding ones. The continuity of publication and equality of treatment, originally intended, have been prevented by frequent and, at times, prolonged breaks in the attention I have been able to give to the subject, and, in some degree, by absence from the place of printing. The consistency which the work had when first rapidly written, as a statement of the opinions to which I had been led by a review of the other linguistic groups with reference to the Oceanic, has been lost by the lapse of six years, during which ethnology has not stood still, while I have been endeavouring to bring these opinions to the test of a more searching enquiry into the peculiarities of the different groups. A final revision, on the completion of the work, can alone restore its uniformity, by bringing all its facts and inferences into harmony with the knowledge of the time at which it publication may be concluded. It seems necessary, however, on the separate issue of the present portion, nearly two years after its earlier pages appeared, to warn the reader that some of its glossarial details are at variance with the more accurate acquaintance with the Himalaie and Dravidian roots which I have obtained from the minute comparisons in chap. vi. These errors will be best understood by a reference to that chapter, and especially to the comparative table of Dravidian and Himalaie roots which will be found in it. Some of the most important will be here noted, in addition to errors of the press and of haste.

"In some places I have used the word *Himalaie* in a large sense, and as the paragraph explanatory of it was omitted in the proper place, it is necessary to mention here that, for want of a better term, I have applied it to that large group of cognate languages and tribes which have immemorably clustered in and around the Himalaya and the ranges subordinate to it, and the preservation of the native character of which must be chiefly ascribed to the protection afforded by these mountains against the more powerful and civilised races of Eastern Asia,—Chinese, Scythic, Dravidian and Arian. An extract from a letter to Mr. Hodgson (July 15 1856) will illustrate the application of the name. "That my Mon-Anam group was the *Benjali* of the pre-Tibetan era (using Tibetan for the present Scythoid branch) and continuous with the Vindyan Dravidian dialects is demonstrated; but I am not prepared to admit that Dravidian has not a distinct archaic ingredient, not derived either from the Mon-Anam or the Tibeto-Burman branch of what I have termed "*Himalaie*" till you can supply us with a more appropriate name. I conceive the Dravido-Australian branch of Scythic or rather of Chino-Scythic, to be of vast antiquity, and to have long preceded the descent of the Chino-Tibetan race from their trans-Himalayan abodes. Its strong Scytho-Caucasian element appears to me to show that it came round the western extremity of the great dividing barrier between middle and southern Asia. The Mon-Anam or *East Himalaie* stem was more Chinese and less Scythic than the later *West Himalaie* or Tibeto-Burman. All the earlier dispersed languages—that is, their mixed and sometimes hybrid descendants—have a core of primary roots, retaining a close resemblance to each other, and to those of the vocabularies that have remained in and near the primary abode of the Mid-Asiatic tribes. In this way I would explain the peculiar Chinese element of Himalaie, Caucasian (preserved by the mountains), and Dravido-Aus-

tralian, and the secondary Himalaic element of Caucasian, Dravido-Australian and other languages. The East Himalaic tribes probably occupied much of what is now eastern Tibet and western China; and though the precise line of their first southern migrations can hardly be traced with certainty, it is most consistent with the general character of the Mon-Anam glossary, to infer that they first descended into the Brahmaputra basin by the routes afterwards followed by the cognate Tibeto-Burman tribes, and thence spread over the Gangetic valley, mixing with the prior Dravirians, and, in the course of ages, eliminating the Dravirian physical element, though retaining Dravirian pronouns, numerals &c. Of course there may have been other more eastern migrations, but the Mon-Anam branch, which predominated and spread everywhere in Ultraiidia prior to the Tibeto-Burman, had its primary *southern* home and nursery in Bengal or the Bhramaputra-Gangetic valley, for its basis of Dravirian, and of a secondary or corrupt dialect of Dravirian, could have been obtained nowhere else."

The name is convenient in distinguishing the various elements of Asonesian ethnology. The latest of the three formations of the Indian province has appropriated its only general name, which is radically Himalaic.* This has rendered it necessary to adopt a second name for that formation which would otherwise have had the first claim to the designation of Indian,—the Dravirian. A third is required for the intermediate great formation of northern India and Ultraiidia. Tibetan might be made to include the Indian and Transgangetic languages of the proper Tibetan type; but Mon-Anam has native characters which cannot be confounded with those of the more Scythoid Tibetan, and it is most convenient to use a distinct name for the formation as a whole.

December 1856.

ADDITIONS AND CORRECTIONS.

ch. v. sec. I Pronouns and Generic Particulars.

Page 1. The calculation of chances here ascribed to Bopp, is Bunsen's. Alluding to the hypothesis that families of language had many distinct origins, he says that "the very roots, full or empty, and all their words, whether monosyllabic or polysyllabic, must needs be entirely different." "There may besides be some casual coincidences in real words; but the law of combination applied to the elements of sound gives a mathematical proof, that, with all allowances, that change is less than one in a million for the same combination of sounds signifying the same precise object." My objections to this position have been greatly confirmed by my subsequent comparisons of Chinese, Himalaic and Scythic roots. The number of the elementary sounds that entered into primitive language appears to have been exceedingly small. The same monosyllabic roots (phonetic) are repeated again and again, and meet us in every class of words. Like all other arts, language was, in its earlier stages, rude and narrow. Only material things were named; and to the undeveloped family of savages, few even of these required names. The same name sufficed for many objects having common properties. The growth of the auditory faculty must have been very slow. Most new names were but old ones

* Sind (whence Hind, Ind) is a Himalaic root for *river*.

in new shapes. Distinct sounds were not in general invented or imitated for new conceptions. The conceptions and the names grew together from the old stock. The separation of families must have been the grand source of development, intellectual and linguistic. By this means chiefly the primary roots acquired variety in phonology and application. Each new family or tribe became the nursery of a new dialect; and the intercommunication of these dialects gradually enriched each with ideas and vocables. It was only by the aid of hundreds of sister-dialects that it became possible for any one dialect, after ages of growth, to make an approach to a language in our sense of the word. In every period of time and in every group of languages the same mutual action goes on. Hence, as the genealogy of every existing dialect ascends to the beginning of human speech in the world or in the race, and passes through long periods of barbarism and of a minute subdivision of tribes, its vocabulary has had innumerable proximate sources. Its discoverable homogeneity is in proportion to the narrowness or exclusiveness of the circle of dialectic development and interaction. It may be at a maximum in a group that has always remained secluded, so far as the geography of any any province admits of this, and although the seclusion has lasted so long that archaically distinct dialects have now few *vocables* in common.

Page 6. The new series of Vindyan vocabularies compiled for Mr. Hodgson by Mr. Nevill (J. B. As. Soc for 1856. p. 46) have the common form of the first pron. *A-nu* Konth, *nga* Savara, *nai-sa* Gadaba, (*noi-nga* poss., *na-nu* Yerukala, (*na-mu*, *na-mhu-ru*, pl., the second form combining the absolute and the relative pl. particles as in the Telugu *mi-ru*). The second pron. has the com. form in Gadaba *no*, Yeruk. *ni-nu* (pl. *ni-nga-lu*=*ni-ng-la* Badaga, *a-va-nu*), Konth *yi-nu*. In the Nilgiri series furnished by Mr. Melz, a *du-m* is given as a sing. form of the 3rd pron. in Toda, along with *a-du*, *n-van*, the pl. being *n-va-r* *a-du-m*.

Page 15. Savara supplies a new proof that the labial 2d pron. of Kol is a plural form used in the singular. It uses the same pl. form, in both numbers, *a-ma-n thou*, *a-ma-n ye* (*pe-n* Gad., *a-va ru* Ye uk).

II. Numerals.

The new Nilgiri and Vindyan series have led me to adopt some modification of the analysis in Chap. v. The reasons will be found in the sec. on the Mon-Anam numerals in Chap. vi.

1. The S. Drav. *on-ru* 1, I now read *o-ru*, and identify the root with *vo* of the 1 of Toda *vo-dda*, Telug. *vo-ku-ti*, Nilgiri *vo-ndu*, *vo-dde*, and the com. *pa*, *ba* of 10, *pa-ku-du* &c. (p. 56). Yerukala has *vo-nda* = *o-ndu* Karn. The Male *pa-ndu-ny*, *o-nd-i-ny* 1 are similar forms. Comp. also the Telugu *va-nda* 100. The Kol and Mon-Anam *mo-i* &c. 1 is the same root, with a different Drav. poss. postf.

2. *era-du* and the variations in 2 and higher numbers I now read *e-ra-du*, *e-d*, *i-ru*, *e-r* &c. *e*, *i* being the sole remnant of the ultimate root, which in its oldest form had *ra*, *ru* only as a postf. or second element, but afterwards superadded *-du* &c. probably on the earlier postf. concurring with the root remnant. Uraon has *e-no* 2, *ma-no* 3. From the facile and frequent elision of the initial labial it is probable that the full form of the initial root was *ba*, *bi*. (p. 60.) The form *be-ra* &c. agrees with the Kol *ba-r*; and that *ba* is the initial root and *r* a second element or a postfix in bar appears from its occurring with the guttural postfix in

Savara, *ba-gu*, a form preserved also in 7 of Yerukala *vo-gu*, Kiranti *bha-g-ga* and Mon *bo-h* (2 for 5), and identical with the Telugu *vo-ha* of *vo-ha-ti* 1 and the com. S. Drav. 10. It is probable that in *be-ra* &c. 2, *ra* was a second archaic definitive or unit.

4. If 2 be *era-du* &c., 4 must be *na-ha*, i. e. the secondary element without the initial one. The Kol *po.n* retains the root of 1 with the concentered consonant of the second element or primary postf. The form *opun-ia* is probably from *op-pu.n*, i. e. *op* 3, *pu.n* 1. The Savara contracted form of 4, *vo.n-jī* (1 for 3, 1) is evidently the full form of the Tuluva *o.n-jī* 1.

5. The Gadaba *mo-lla-yi* confirms the analysis of the Kol *mu-na*, *mo-r* &c. as 3 (S. Drav. *mu-da* &c.) for 3, 2.

8. *e-nlu* (not *en-tu*) as in 2.

The Kol *irl* appears to be radically *i-r-l*, a contraction of the S. Drav. *i-ra-du* = *i-ra-lu*.

The exceptional Gond, Telugu and Tuluva forms must, in conformity with the amended analysis of 2, be read *a-na-mu-r*, *eni-mi-di*, *ena-me* i. e. *ana*, *eni*, *ena* 2, and *mu-r*, *mi-di*, *me* 10 in the form of the unit found in the Kol 5, S. Drav. 3 &c.

The Telugu *tonnidi* must be *to-mi-di*, i. e. *mi-di* for 10 as in *eni-mi-di* 8, and to, a distinct root for 1, preserved also in the Chentsu *to-ta*, 9, and corresponding with the Drav. dental 3d pron. and def. (p. 56).

The Kol *a-r* of 9 has a for 1, as in the S. Drav. 6.

The identification of the S. Drav. on 1 with *vo.n*, and *era* 2 with *be-ra* &c. complete the proof of the agreement between the basis systems of S. Dravirian and of Vindyan, and between both and the primitive labial system preserved in Australian. In its first form the system was simply the labial definitive, or the labial and liquid, repeated or compounded.

It is clear that the liquid in *bara*, *bira*, &c. 2, is very archaic, and that it early possessed a distinct numeral and plural force. In the Semito-African and Scythic systems, in which the same compound was the principal archaic numeral name, the liquid, changing to the sibilant &c., has been more stable than the labial initial, and there are strong reasons for regarding it as the essential element in 2. See App. to Sec. 6 of ch. v., *The Semitic and African Numerals*, pp. 18, 19, 43. See also a Note on the same subject inserted in the Journal with Sec. 1. of chp. v.

128. The note belongs to p. 129, and note † of p. 129 should be note * of p. 128.

132. line 3 from the bottom *for pishik* read *to-pisa*, and in the following line, *for to-pisa*, read *musu*, *mus*.

137. The substantive root in the name for the *Buffaloe* is the labial. The liquid is the root for *water*, *e-ru-ma* = *water-com*.

138. In tango *ewo* of Jili (not Singpho) the root is *nga* (*ta-nga*).

140. The statement that in Chinese the root alone signifies *buffaloe* and the inference from it are incorrect. In Chinese, as in Dravirian, the name for the buffaloe is *water-com* (or *ox*), and it is only by contraction that *gu* &c. alone is applied to it.

141. The Deer god is identical with the Bhotian god *mara*.

145. The sibilant name of Tiberkhad &c. is Tibeto-Ultraiidian.

155. 7th line from foot, *for moon*, read *silver*.

157. del. 5th line from foot.

CHINO-HERBAL MEDICINES.

Chinese

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	100.
KWAS-HWA	yí yih i	'rh u'h leung	san	sz' se	wu	lu	tai	puh	kin	shí	pe
SHANG-HAI	ih	ní	san	sz	ng	loh	t'aih	yeh	kien	zeh	
HOK-HIEN	chít	ho	sa	si	go	huk, lí	ch'hit	pe	kuu	chap	pú
KWANG-TUNG	yut yit	i jì leung	shu	sz si	ng	huk	tsut	pat	kau kiu	ship	pák pá
HAI-LAM	íu	no	ta	tí	ngo	lá	sit	boi	kau	tap	bé

Tiboglutath.

THOHLIN	WH.	...	<i>g-chig</i>	<i>g-nyis</i>	<i>g-sum</i>	<i>ḍ-zhyi</i>	<i>nha</i>	<i>d-ruk</i>	<i>ḍ-dun</i>	<i>ḍr-gyud</i>	<i>ḍ-ga</i>	<i>ḍ-chu</i>	<i>ḍr-gyu-tham-ba</i>
"	SP.	...	<i>chik</i>	<i>nyi</i>	<i>sum</i>	<i>zhyi</i>	<i>nga</i>	<i>thu</i>	<i>dun</i>	<i>gyz</i>	<i>guh</i>	<i>tham-ba</i>	<i>gya, gyu-tham-ba</i>
			<i>chi Lh.</i>					<i>duu Lh.</i>				<i>cha-tham Lh.</i>	<i>khe-nga Lh.</i>
THAPA	...	...	<i>za</i>	<i>nye</i>	<i>su</i>	<i>lha</i>	<i>gwa</i>	<i>chho</i>	<i>z-ne</i>	<i>rhice</i>	<i>go</i>	<i>s-ga</i>	<i>rha</i>
THAMU	...	...	<i>a-ré</i>	<i>nye-ré</i>	<i>k-shi-ré</i>	<i>g-zhi-ré</i>	<i>wa-ré</i>	<i>lha-ré</i>	<i>s-ta-ré</i>	<i>kh-ra-ré</i>	<i>g-ra-ré</i>	<i>ka-du-ré</i>	<i>aḍ-shi</i>
GYEUNG	...	...	<i>ku-bi, kerge</i>	<i>ku-cé, ka-gu</i>	<i>ku-bi</i>	<i>ku-shi</i>	<i>kung-ngo</i>	<i>ku-tu</i>	<i>ku-shi-nes</i>	<i>a-ryet</i>	<i>kung-ga</i>	<i>shi</i>	<i>pa-ne</i>
MANFA	...	...	<i>ta-ḍé</i>	<i>na-ḍé</i>	<i>ai-bé</i>	<i>re-bé</i>	<i>nga-bé</i>	<i>ra-bé</i>	<i>s-ku-bé</i>	<i>zi-bé</i>	<i>gu-bé</i>	<i>che-chi-bé</i>	<i>te-je</i>

Gangeto-U Train of Ham.

West.	TAKPA	...	thi	nai	sum	p-li	lia-nge	h-ro	nis	gyet	du-gu	p-chi	
	DOPHEA	...	a-ken	a-wi	a-am	a-p-li	a-nge	a-k-p-le	ka-nag	p-hu-nag	ka-gu	ring	
	AKHE	...	a-ha	a-wi-ha	a-am-ha	a-p-i-ha	pi-li-nge-ha	a-ke-ha	ka-nit-ka	p-nit-ka	ka-mang-ha	a-ying-ha	
	MIHE	...	a-ha	a-wi-ha	a-am-ha	a-p-i-ha	a-nge-ha	a-keng-ha	hi-nit-ka	pi-ni-ya	ka-mang-ha	a-ying-ha	
to	SINGGOK MIHE	a-to-ro		nga-ye	a-am-a	a-p-i-a	a-nge	a-kang-e	ka-nid-a	pi-nye	ka-mang-e	a-ying-e	a-ying a-ying-ko
	CHINGGOK	...	thar	ngik-ching	sum	phic	nga	khung	sum	yan	ga	sa, song	khie-ya
	DHEMEE	...	e-lung	nhe-lung	sum-lung		ma-lung	tu-lung	hi-lung	ya-lung	ka-ha-lung	te-lung	ma hi-a
East	LEPHEA	...	ka-t		sum	phic-li	pha-non	tu-rok	ka-kyok	ka-ket	ka-kyot	ka-ti	khie pho-ngo
	LEPHE	...	thit	nyet-sh	sum-sh	li-sh	nga-sh	tuk-sh	no-sh	ye-sh	phung-sh	thi-bong	thi-bong ap
	KIRANT	...	ek-tai	ka-ut	sum-ya	hi-ya	nga-ya	tuk-ya	bi-m-g-ya	re-ya	phung-ya	kip	
	MURKE	...	gh-wit	ngi	sum	li	nga	khia	nis	p-re	kuh	chi-wai	ka-kal ngn
	YEWAK	...	chhi	ni	son	pi	nga	tu	nis	chya	gut	sa aho	gut sa aho, sat ch
land,	GURUNG	...	h-ri	ni	song	p-li	nga	tu	nis	p-re	kuh	chah	
	MAGUE	...	ka-t	nis	song	ka-li	ba-aga						
	SUYWAR	...	ka-t	nish-i	song	lo	nga	ruk	chi-ni	yab	guh	sa ahi	s-wai ka
	CHERPANG	...	ya-zho	nhi-zho	sum-zho	p-li-zho	pu-mai-zho	h-rak-zho	cha-na-zho	p-rap-zho	ta-ku-zho	gyi-zho	
	MICHASANG	...	id, it	nish	sum	pu, pit	nga	tuk	fish	ru-i	gu-i	sa-i	ra, ra ghea
Gangtee	TIDENKHAD	...	ti	nish-i	sum	pu-t	ngur	tu	s-nish	ghah	ga	sa	
						pi	ngur	tuk-i	nish-i	gha-i	gu-i	chu-i	
	TOYGO-DEU	...	ta	no	thung	li-t	ngur-t	the-r	nwa-t	tha-t	ku-t	tal-si	ta-lo-yeu
	KAREN (Siam)	...	na	chi	thun	li	ye	gha	nwi	gho	khwi	ta-tai	ta-lo-yeu
	" (Pwo)	...	ka-da	ni	thun	li	yei	ghu	nwi	gho	khwi	ka-tai	ka ya
	KHYENG	...	u-hut	pu-nhi	thun	li	ngihun	sa-nk	she	sat	ko	hu	
			ka-hat		pa-thung		a-hu	a-hu	shi	shat			
South	KAMI	...	ma	ni	ka-tun	nwa-li	pa-nge	ta-r	sa-ri	ka-ya	ta-ko	ha-suk	ta-ra
	KOME	...	ha	nhi	thun	pu-li	pu-u	ta-ru	sa-ru	ta-ya	ta-kan	ha	cham-wa-ri
			a-huk	na	thun	pu-li	pa-ng	ta-ru	sa-ru	ta-ya	ta-kan	ha	cham-wa-ri
					thun	pu-li	pa-ng	ta-ru	sa-ru	ta-ya	ta-kan	ha	cham-wa-ri
Yuma group,	KYAO	...	ka-t	niel	thun	n-li	nga	c-rak	s-ri	net	ka	ha-suk	ta-ra
	MEU	...	lung	p-re	thun	ta-li	ta-nge	ta-nu	ra-nit	ryat	ta-ku	ha	cham-wa-ri
	SAK	...	su-wat	mea	thun	pu-li	nga	khayok	tha-ni	a-tai	ka	ha-suk	ta-ra
	SHEK-DE	...	ma-ha	ma-ny	thun	ma-pa	ma-chu-ri	ma-chu-ri	ma-chu-ri	ma-chu-ri	ma-chu-ri	ma	ta-ya
	BOYU-DE	...	ka-hat	pu-ma-hat	thun-hat	ka-hat	ka-hat	ka-hat	ka-hat	ka-hat	ka-hat	ka-hat	ka-hat
	KUEI (SERRAVAL)	...	ka-t	niel	thun	li	nga	c-rak	s-ri	net	ka	ha-suk	ta-ra
	" (MAHAR)	...	ka-t	niel	thun	li	nga	c-rak	s-ri	net	ka	ha-suk	ta-ra
	" (MAHAR)	...	ka-t	niel	thun	li	nga	c-rak	s-ri	net	ka	ha-suk	ta-ra
	BUTMAN WIL	...	ka-t	niel	thun	li	nga	khayok	khoun-nhiach	rhach	ko	chih	ta-ra
	"	...	ka-t	niel	thun	li	nga	khayok	khoun-nhiach	rhach	ko	chih	ta-ra
Manipur-Nagaing gr.	MANIPURE	...	a-ma	a-ni	a-ma	ma-li	ma-nge	ka-rak	ka-nit	ka-nit	ka-nit	ka-nit	ka-nit
	ANGING	...	ka-t	ka-ma	ka-chu-na	ma-dai	ma						

Mon-Xiam. (mixed)

Lat.	Long.	Lat.	Long.	orig. ling. A.	orig. Sung. A.	same	at	bu	hak rak A.	chet teet	pet	keo	app	rai (Siang) hoi (Lue)	pak A. Khamut
MAN	100° 45' N.	100° 45' N.	100° 45' N.	mu-e mu-e	hu pa	pu-e pu-e	pu-e pu-e	pu-e pu-e	ku-e ku-e	ku-e ku-e	ku-e ku-e	ku-e ku-e	chut teet	chut teet	chut teet
KAMOTAN	100° 45' N.	100° 45' N.	100° 45' N.	mu-e	pu-e	pu-e	pu-e	pu-e	ku-e	ku-e	ku-e	ku-e	chut teet	chut teet	chut teet
KA CHUEN	100° 45' N.	100° 45' N.	100° 45' N.	mu-e	hu	pu-e	pu-e	pu-e	ku-e	ku-e	ku-e	ku-e	chut teet	chut teet	chut teet
ANAM	100° 45' N.	100° 45' N.	100° 45' N.	mu-e	hu	pu-e	pu-e	pu-e	ku-e	ku-e	ku-e	ku-e	chut teet	chut teet	chut teet
PIEN	100° 45' N.	100° 45' N.	100° 45' N.	mu-e	hu	pu-e	pu-e	pu-e	ku-e	ku-e	ku-e	ku-e	chut teet	chut teet	chut teet

DEATH-SENTENCE NUMERALS

[illegible]





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